

**The Death of the Regulatory Compact:
Adjusting Prices and Expectations in the Law of
Regulated Industries**

JIM CHEN*

Telecommunications regulation should be viewed as an attempt to solve the problem of financing large-scale public infrastructure over a sufficiently long period of time to pose significant and perhaps prohibitive amounts of risk. Investors are reluctant to commit capital to infrastructure if they cannot be assured of a reasonable return on their investment. Pricing rules in telecommunications are designed to protect incentives to invest in high-cost networks. Pricing disputes in the American telecommunications industry have raised serious questions over the extent to which public rules are governed by the United States Constitution's promise that private property shall not be taken for public use, without just compensation. These disputes are especially intense when they involve the price at which incumbent network owners must sell unbundled network elements to competitors seeking interconnection. This Article argues that attempts to enforce a pricing rule based on a utility's historic record of prudent investment lacks any plausible basis in American constitutional law. The

* Associate Dean and James L. Krusemark Professor of Law, University of Minnesota Law School. This Article synthesizes my previous work on regulated industries, particularly *The Nature of the Public Utility: Infrastructure, the Market, and the Law*, 98 NW. U. L. REV. 1617 (2004); *Standing in the Shadows of Giants: The Role of Intergenerational Equity in Telecommunications Reform*, 71 U. COLO. L. REV. 921 (2000); and *The Second Coming of Smyth v. Ames*, 77 TEX. L. REV. 1535 (1999), in light of changes in the law and in my own views. Cf. Jim Chen, *The Magnificent Seven: American Telephony's Deregulatory Shootout*, 50 HASTINGS L.J. 1503, 1580 (1999) ("Write today, regret tomorrow, renounce mañana."). I have presented this Article at the Duke University School of Law, the University of Minnesota Law School, the Arizona State University College of Law, and the Indiana University School of Law at Bloomington. I have also presented this Article at the sixteenth European regional conference of the International Telecommunications Society (held at the Universidade Católica Portuguesa in Porto) and at the 2005 meeting of the Midwestern Law and Economics Association (held at the Northwestern University School of Law). Guy-Uriel Charles, Daniel J. Gifford, Gil Grantmore, Jill Elaine Hasday, Peter Huang, Bradley C. Karkkainen, and Alexandra Klass provided helpful comments. Andrew Davis supplied very capable research assistance. Special thanks to Kathleen Chen.

misguided attempt to seek a constitutional solution to the problem of network pricing arises from a fundamental misunderstanding of the so-called regulatory compact. Rather, the problem of network pricing in highly complex and technologically volatile infrastructural industries such as telecommunications and electricity demands sophisticated legal tools such as price-level regulation, transitional pricing rules such as avoided-cost pricing and the long-run incremental cost rule for pricing unbundled access to incumbent networks, reverse auctions to fulfill universal service obligations, and tailored stranded cost recovery provisions. Reliance on a metaphorical regulatory compact has inflicted serious harm to the law of regulated industries. Accordingly, this obsolete metaphor should be discarded.

TABLE OF CONTENTS

I. INFRASTRUCTURE U.S.A.....	1267
II. SINES OF THE TIMES: THE AGES OF AMERICAN REGULATORY LAW ...	1274
A. <i>The Rise, Fall, and Rebirth of Confiscatory Ratemaking</i>	1274
1. <i>The Legislative Phase</i>	1274
2. <i>The Judicial Phase</i>	1278
3. <i>The Administrative Phase</i>	1283
4. <i>Confiscation and Network Access</i>	1291
B. <i>Access Pricing Without Constitutional Constraint</i>	1295
1. <i>The Fallacy of "Deregulatory Takings"</i>	1295
2. <i>Simply Priceless</i>	1305
III. THE ART OF THE COVENANT:	
RECONSIDERING AND REJECTING THE REGULATORY COMPACT.....	1313
A. <i>The Rise and Fall of the Public Franchise</i>	1316
B. <i>The Persistence of the Public Utility Model</i>	1326
IV. THE DEATH OF COMPACT.....	1336

[L]inking tendrils of speech twine through the city blocks, spread over pavements, grow out along broad parked avenues, speed with the trucks leaving on their long night runs over roaring highways, whisper down sandy byroads past wornout farms, joining up cities and fillingstations, roundhouses, steamboats, planes groping along airways; words call out on mountain pastures, drift slow down rivers widening to the sea and the hushed beaches.¹

I. INFRASTRUCTURE U.S.A.

Few legal issues have greater economic impact than the regulation of “networks that distribute products or services over geographic space.”² Estimates of the impact of policies governing so-called “infrastructure industries” or “public utilities”³ in the United States generally range in tens of billions of dollars per year.⁴ Insofar as “static gains and losses from regulation are probably small compared to the historical gains in welfare resulting from innovation and productivity growth,”⁵ these policies’ dynamic effects may be even more impressive. Yet legal scholars rarely “give adequate attention” to economic regulation, let alone related “considerations of dynamic efficiency.”⁶

¹ JOHN DOS PASSOS, *U.S.A.* 2 (Library of America 1996) (1930).

² JOSÉ A. GÓMEZ-IBÁÑEZ, *REGULATING INFRASTRUCTURE: MONOPOLY, CONTRACTS, AND DISCRETION* 4 (2003).

³ See *id.* (using these terms interchangeably).

⁴ See, e.g., PAUL TESKE, SAMUEL BEST & MICHAEL MINTROM, *DEREGULATING FREIGHT TRANSPORTATION: DELIVERING THE GOODS* 75 (1995) (crediting truck deregulation with \$38 billion in annual consumer surplus); Robert W. Hahn & John A. Hird, *The Costs and Benefits of Regulation: Review and Synthesis*, 8 *YALE J. ON REG.* 233, 250 (1991) (estimating annual savings of \$33.6 to \$42.9 billion); Alfred E. Kahn, *Deregulation: Looking Backward and Looking Forward*, 7 *YALE J. ON REG.* 325, 343 (1990) (claiming unspecified “billions of dollars each year”); Clifford Winston, *Economic Deregulation: Days of Reckoning for Microeconomists*, 31 *J. ECON. LITERATURE* 1263, 1284 (1993) (estimating an annual gain of \$36 to \$46 billion); cf. Jerry A. Hausman, *Valuing the Effect of Regulation on New Services in Telecommunications*, in *BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS* 1, 23 (Martin Neil Baily et al. eds., 1997) (alleging that the delayed rollout of wireless telephony inflicts roughly \$33 billion in lost annual productivity).

⁵ Paul L. Joskow & Nancy L. Rose, *The Effects of Economic Regulation*, in 2 *HANDBOOK OF INDUSTRIAL ORGANIZATION* 1449, 1484 (Richard Schmalensee & Robert D. Willig eds., 1989).

⁶ Ha-Joon Chang, *The Economics and Politics of Regulation*, 21 *CAMBRIDGE J. ECON.* 703, 721 (1997).

Perhaps the fault lies with treating the law of regulated industries “as if it contained only the axioms and corollaries of a book of mathematics.”⁷ Even a cursory look at this body of law suggests an “echo of the infinite, a glimpse of its unfathomable process, a hint of the universal law.”⁸ Contemporary jurisprudence recapitulates cultural history: today’s law of regulated industries “embodies the story of [this] nation’s development through [the] centuries”⁹ and echoes the struggles that have transformed the United States from an infant republic to a global superpower. The law of regulated industries reflects the “sharp, often highly emotional, sometimes violent economic and political combat” that shook the United States between its Civil War and World War II.¹⁰ Around the world, the construction and maintenance of facilities providing water, energy, transportation, or communications typically force governments to confront difficult issues such as monopolization, coordination difficulties, threats to human health and the environment, and distributional concerns such as universal access to basic commodities and services.¹¹ Infrastructure industries often attract close, hostile legal attention precisely because they are usually “the first nationally prominent big businesses to emerge from [an] industrial revolution.”¹² The American variation on this legal theme illustrates in microcosm the “much larger problem of the political risk of investing in emerging markets.”¹³

The infrastructure industries that present the most intractable legal problems are the massive networks whose value “depends on the total number of users” and “becomes more valuable as additional customers are connected to it.”¹⁴ Even though the United States has outgrown its

⁷ Sheldon M. Novick, *Introduction* to OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 1 (Dover Publications 1991) (1902).

⁸ Oliver Wendell Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 478 (1897), reprinted in 110 HARV. L. REV. 991, 1009 (1997).

⁹ HOLMES, *supra* note 7, at 1.

¹⁰ JAMES WILLARD HURST, *LAW AND MARKETS IN UNITED STATES HISTORY: DIFFERENT MODES OF BARGAINING AMONG INTERESTS* 20 (1982).

¹¹ See GÓMEZ-IBÁÑEZ, *supra* note 2, at 4–6; cf. Lois R. Lupica, *Transition Losses in the Electric Power Market: A Challenge to the Premises Underlying the Arguments for Compensation*, 52 RUTGERS L. REV. 649, 652 n.6 (2000) (describing the American economy’s dependence on electrical infrastructure).

¹² GÓMEZ-IBÁÑEZ, *supra* note 2, at 190.

¹³ Susan Rose-Ackerman & Jim Rossi, *Disentangling Deregulatory Takings*, 86 VA. L. REV. 1435, 1469 (2000).

¹⁴ David A. Balto, *Networks and Exclusivity: Antitrust Analysis to Promote Network Competition*, 7 GEO. MASON L. REV. 523, 524 (1999); see also *Wis. Tel. Co. v. R.R. Comm’n*, 156 N.W. 614, 621 (Wis. 1916) (recognizing that interconnection benefits all

developmental phase, the legal treatment of infrastructure continues to play a critical role in a putatively information-driven economy. Although economic priorities in developed nations may have shifted from roads and sewers to high-speed communications networks, the financing of infrastructure still follows longstanding economic and political rules. The Internet today inhabits roughly the same social space that railroads occupied in the Old West,¹⁵ right down to stories of rampant speculation, imprudent overinvestment, and outlandish governmental largesse. The fare may have changed from barbed wire to wireless broadband, but government is still feeding favored guests at the "Great Barbecue."¹⁶ Whatever the eventual social impact of the Internet, it is already clear that many aspects of the United States' information technology juggernaut depend on massive subsidies favoring physical infrastructure and logical coordination.¹⁷

The law of regulated industries has reached that "most difficult period in the life of" any entity: "middle age."¹⁸ This body of law may be "no longer what it once was but there is life in the old dog yet."¹⁹ "[T]he history of

affected carriers by enabling each network's customers to call each other); Adam Candeub, *Network Interconnection and Takings*, 54 SYRACUSE L. REV. 369, 398-99 (2004) (same). See generally DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW* 208-12 (1994); Chien-fu Chou & Oz Shy, *Network Effects Without Network Externalities*, 8 INT'L J. INDUS. ORG. 259 (1990); Paul A. David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332 (1985); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985); S.J. Liebowitz & Stephen E. Margolis, *Are Network Externalities a New Source of Market Failure?*, 17 RES. L. & ECON. 1 (1995); Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479 (1998).

¹⁵ See generally JAMES W. ELY, JR., *RAILROADS AND AMERICAN LAW* (2002). The Gilded Age had its own communicative novelties: the telegraph and the telephone. See TOM STANDAGE, *THE VICTORIAN INTERNET* (1998); Jane Kaufman Winn, *Open Systems, Free Markets, and Regulation of Internet Commerce*, 72 TUL. L. REV. 1177, 1238 (1998) (observing that "electronic commerce is arguably as old as the telegraph"); cf. HAROLD A. INNIS, *THE BIAS OF COMMUNICATION* 186 (1951) (describing how mechanized printing and the telegraph turned journalists into people "who [write] on the backs of advertisements").

¹⁶ See Eben Moglen, *The Invisible Barbecue*, 97 COLUM. L. REV. 945 (1997).

¹⁷ See generally Steve Bickerstaff, *Shackles on the Giant: How the Federal Government Created Microsoft, Personal Computers, and the Internet*, 78 TEX. L. REV. 1 (1999); Michael A. Geist, *The Reality of Bytes: Regulating Economic Activity in the Age of the Internet*, 73 WASH. L. REV. 521, 525-30 (1998); Maureen A. O'Rourke, *Fencing Cyberspace: Drawing Borders in a Virtual World*, 82 MINN. L. REV. 609, 615-19 (1998).

¹⁸ GRANT GILMORE, *THE AGES OF AMERICAN LAW* 96 (1977).

¹⁹ *Id.*

public utility regulation consists of three major phases—legislative, judicial and administrative.”²⁰ Each phase opened with a watershed Supreme Court decision. The 1877 case of *Munn v. Illinois*²¹ heralded the legislative phase, while the path from the 1898 case of *Smyth v. Ames*²² to the 1944 case of *Federal Power Commission v. Hope Natural Gas Co.*²³ marked the transition from the judicial phase to the administrative. *Hope Natural Gas* signaled the end of judicial involvement in ratemaking: “It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry . . . is at an end.”²⁴

Hope Natural Gas in particular unites the law of regulated industries with the jurisprudential legacy of the New Deal.²⁵ *Hope Natural Gas* confirmed plenary federal power over an expanded conception of interstate commerce. Even more prominently, *Hope Natural Gas* counseled judges to defer to legislative and administrative framers of economic policy. Though less celebrated than such landmarks as *United States v. Carolene Products Co.*,²⁶ *West Coast Hotel Co. v. Parrish*,²⁷ and the Commerce Clause trilogy of *NLRB v. Jones & Laughlin Steel Corp.*,²⁸ *United States v. Darby*,²⁹ and *Wickard v. Filburn*,³⁰ *Hope Natural Gas* made a vital contribution to the jurisprudential resolution that would stabilize American constitutional law for decades.

Much of the New Deal settlement is unraveling. Federalism, thought as recently as the 1990s to have passed into the mists of history,³¹ rides again.

²⁰ CHARLES F. PHILLIPS, JR., *THE REGULATION OF PUBLIC UTILITIES: THEORY AND PRACTICE* 180 (3d ed. 1993).

²¹ 94 U.S. 113 (1877).

²² 169 U.S. 466 (1898).

²³ 320 U.S. 591 (1944).

²⁴ *Id.* at 602.

²⁵ See Eric R. Claeys, *The Telecommunications Act of 1996, the Takings Clause, and Tensions in Property Theory*, 22 YALE J. ON REG. 205, 208 (2005) (observing that *Hope Natural Gas*’s “Realist view” of property “captures many assumptions about takings that follow if the institution of private property needs to be reconciled to the redistributive and welfarist aims of the post-New Deal regulatory state”).

²⁶ 304 U.S. 144 (1938).

²⁷ 300 U.S. 379 (1937).

²⁸ 301 U.S. 1 (1937).

²⁹ 312 U.S. 100 (1941).

³⁰ 317 U.S. 111 (1942).

³¹ See, e.g., Larry Kramer, *Understanding Federalism*, 47 VAND. L. REV. 1485, 1486 (1994); William Van Alstyne, *The Second Death of Federalism*, 83 MICH. L. REV. 1709, 1721 (1985).

United States v. Lopez,³² *Seminole Tribe v. Florida*,³³ and *City of Boerne v. Flores*³⁴ have “put a triple whammy on congressional authority.”³⁵ Aggressive reinterpretation of the Commerce Clause, the Tenth and Eleventh Amendments, and Section Five of the Fourteenth Amendment heralds “a mighty effort” to restore the states’ putatively “rightful place.”³⁶ In an age when the Tenth Amendment has been transformed from a “truism”³⁷ into a jurisprudential wrecking ball,³⁸ the constitutional underpinnings of the law of regulated industries are by no means inoculated against reconsideration.

Nothing lasts forever, and claims to truth are no exception. “[R]egulatory measures are temporary expedients, not eternal verities”³⁹ Neither regulatory agencies nor the laws they implement are immune from the cycles that define all living things. “[R]egulatory bodies, like the people who comprise them, have a marked life cycle. In youth they are vigorous, aggressive, evangelistic, and even tolerant. Later they mellow and in old age . . . they become . . . either an arm of the industry they are regulating or senile.”⁴⁰ Periodicity in the law of regulated industries follows the rhythm of grander political or even cultural cycles.⁴¹

³² 514 U.S. 549 (1995).

³³ 517 U.S. 44 (1996).

³⁴ 521 U.S. 507 (1997).

³⁵ Philip P. Frickey & Steven S. Smith, *Judicial Review, the Congressional Process, and the Federalism Cases: An Interdisciplinary Critique*, 111 YALE L.J. 1707, 1722 (2002).

³⁶ JOHN T. NOONAN, JR., *NARROWING THE NATION’S POWER: THE SUPREME COURT SIDES WITH THE STATES* 8 (2002).

³⁷ *United States v. Darby*, 312 U.S. 100, 124 (1941) (“The [Tenth] [A]mendment states but a truism that all is retained which has not been surrendered.”); cf. *McCulloch v. Maryland*, 17 U.S. (4 Wheat.) 316, 406 (1819) (Marshall, C.J.) (describing the language of the Tenth Amendment as “leaving the question, whether [a] particular power . . . has been delegated to the one government, or prohibited to the other, to depend on a fair construction of the [Constitution as a] whole instrument”).

³⁸ See *Printz v. United States*, 521 U.S. 898 (1997); *New York v. United States*, 505 U.S. 144 (1992); *Gregory v. Ashcroft*, 501 U.S. 452 (1991); cf. *Reno v. Condon*, 528 U.S. 141 (2000).

³⁹ *Fed. Power Comm’n v. E. Ohio Gas Co.*, 338 U.S. 464, 489 (1950) (Jackson, J., dissenting).

⁴⁰ JOHN K. GALBRAITH, *THE GREAT CRASH*, 1929, at 71 (2d ed. 1961); see also MARVER H. BERNSTEIN, *REGULATING BUSINESS BY INDEPENDENT COMMISSION* 74 (1955) (“The life cycle of an independent commission can be divided into four periods: gestation, youth, maturity, and old age.”).

⁴¹ See generally GILMORE, *supra* note 18, at 96; ARTHUR M. SCHLESINGER, JR., *THE CYCLES OF AMERICAN HISTORY* (1986).

The law has thus reached a crucial transition,⁴² perhaps even a paradigm-shifting crisis.⁴³ In the past generation, the law of regulated industries "has undergone a great transformation."⁴⁴ Among the numerous facets of this legal metamorphosis, a single source of anxiety has commanded the lion's share of scholarly attention. The comprehensive substitution of market-oriented mechanisms for conventional regulation of entry, exit, rates, and firm structure has undermined quasicontractual understandings between regulated firms and the government. In particular, incumbent providers of infrastructure fear that they will lose the ability to recoup their historical investments should the law move completely from command-and-control regulation to open markets without compensating these incumbents for losses attributable to that transition.

The prevailing "administrative" paradigm in the law of regulated industries, traceable to *Hope Natural Gas*, counsels incumbent utilities to couch their demands for relief in a distinctively Progressive idiom. Advocates for relief from deregulatory anxiety should address their requests to scientifically expert, politically accountable regulatory agencies. In the spirit of *Ashwander v. TVA*,⁴⁵ subconstitutional remedies such as price-level regulation, transitional rules such as avoided-cost pricing, reverse auctions for universal service subsidies, and statutory stranded cost recovery should represent the law's first, rather than last, resort.

Such levelheaded thinking rarely prevails in a legal academy that shuns concrete, feasible proposals in favor of flamboyant, outrageous propositions enjoying no realistic prospects of real-world success.⁴⁶ In the aftermath of the terrifyingly destabilizing Telecommunications Act of 1996⁴⁷ and the Federal Communications Commission's (FCC) aggressive implementation of that statute,⁴⁸ prominent scholars such as J. Gregory Sidak, Daniel Spulber,

⁴² See generally Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509 (1986).

⁴³ See generally THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 66-76 (2d ed. 1970) (describing "crisis" as the engine of intellectual change and the first step toward an eventual paradigm shift).

⁴⁴ See generally Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323 (1998).

⁴⁵ 297 U.S. 288 (1936); see *id.* at 346-49 (Brandeis, J., concurring in the judgment).

⁴⁶ See generally Daniel A. Farber, *Gresham's Law of Legal Scholarship*, 3 CONST. COMMENT. 307 (1986).

⁴⁷ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56.

⁴⁸ See *In re Access Charge Reform*, 7 Communications Reg. (P & F) 1209 (Fed. Communications Comm'n 1997), *aff'd sub nom.* Sw. Bell Tel. Co. v. FCC, 153 F.3d 523 (8th Cir. 1998); *In re Access Charge Reform Price Cap Performance Review for Local*

and Christopher Yoo have advanced arguments that would compensate public utility shareholders for all amounts prudently invested in the construction and historic maintenance of legacy infrastructure as a matter of the Contracts and Takings Clauses of the Constitution. The judicial remedies advocated by these scholars would effectively constitutionalize specific, pro-incumbent ratemaking methodologies. Arguments in this vein, ostensibly left for dead after *Hope Natural Gas*'s repudiation of *Smyth v. Ames*, have suddenly regained the veneer of intellectual respectability.

The attempted reconstitutionalization of the law of regulated industries lacks any plausible doctrinal basis. Arguments of the sort that Professors Sidak, Spulber, and Yoo have applied to deregulatory transitions are simply untenable, whether framed as a branch of Contracts Clause, Takings Clause, or substantive due process jurisprudence. This harsh assessment actually understates the degree to which these scholars have erred. Their notion of "deregulatory takings" is wrong, staggeringly wrong. An observer reviewing the annals of constitutional commentary would strain to identify another proposal that has attracted so much scholarly attention on the basis of so little legal merit. Indeed, it is mathematically impossible to state the ratio of academic rhetoric to doctrinal support because it would require division by zero.

Part II of this Article, "Sines of the Times: The Ages of American Regulatory Law," will review the crucial transitional beacons in the law of regulated industries. Honest exegesis of the controlling cases forecloses the restoration of comprehensive judicial oversight of ratemaking. The case law lends no support for the leading academic proposals to constitutionalize any single ratemaking methodology. Scarcely a century after proclaiming judicial ascendancy over economic regulation, the Supreme Court has renounced judicial primacy over the lines of business, internal organization, and pricing practices of public utility companies. Ironically, the sole aspect of *Smyth v. Ames* that does endure today is the very rule that offends the theorists who would effectively reconstitutionalize utility ratemaking. *Smyth*'s "fair value" rule, once derided as an absurdly unmanageable abstraction, has reemerged as the analytical touchstone by which market-oriented regulatory policy should be gauged.

Part III, "The Art of the Covenant: Reconsidering the Regulatory

Exch. Carriers, 11 F.C.C.R. 21,354 (1996); *In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 F.C.C.R. 15,499 (1996), *aff'd in part, rev'd in part sub nom.* AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366 (1999); *In re Federal-State Joint Bd. on Universal Serv.*, 12 F.C.C.R. 8776 (1997), *aff'd in part, rev'd in part sub nom.* Tex. Office of Pub. Util. Counsel v. FCC, 183 F.3d 393 (5th Cir. 1999), *cert. denied*, 530 U.S. 1210 (2000), and *cert. dismissed*, 531 U.S. 975 (2000).

Compact,” translates the Supreme Court’s regulatory decisions into a proper understanding of the so-called “regulatory compact.” The misguided academic revival of the judicial phase in the law of regulated industries arises from a fundamental misunderstanding of this enduring legal metaphor. After tracing this metaphor from its origin in nineteenth century municipal franchises to contemporary advocacy of direct governmental contracting with private providers of infrastructure, I conclude that no variant of the contractual approach to public utility law can supply workable rules for financing highly complex and technologically volatile network industries. Successful regulation of electricity and telecommunications demands sophisticated legal tools beyond the institutional capacity of state or federal courts. The project requires the technical proficiency and political accountability that only regulatory experts can bring to bear. A proper understanding of the “regulatory compact” counsels us to abandon this ancient but obsolete legal metaphor.

II. SINES OF THE TIMES: THE AGES OF AMERICAN REGULATORY LAW

*No golden age endures forever. . . . [T]he best and most creative minds of a generation are drawn to a particular field. . . . After a generation or two of intense activity the job is done; the best and most creative minds of the next generation follow their genius into new fields. But it will be a long time before anyone realizes that the last great play has already been written, the last great symphony composed.*⁴⁹

A. *The Rise, Fall, and Rebirth of Confiscatory Ratemaking*

1. *The Legislative Phase*

Public utility law in the United States—or at least its constitutional component—is thought to have originated in *Munn v. Illinois*⁵⁰ and the *Granger Cases*,⁵¹ the substantive due process cases of 1877 that authorized states to regulate certain lines of business in furtherance of the “public

⁴⁹ GILMORE, *supra* note 18, at 49.

⁵⁰ 94 U.S. 113 (1877).

⁵¹ See *Chicago v. Iowa*, 94 U.S. 155 (1877); *Peik v. Chi. & N.W. Ry.*, 94 U.S. 164 (1877); *Chicago v. Ackley*, 94 U.S. 179 (1877); *Winona & St. Peter R.R. v. Blake*, 94 U.S. 180 (1877); *Stone v. Wisconsin*, 94 U.S. 181 (1877).

interest.”⁵² *Munn v. Illinois* empowered the states to curb the market power of agricultural middlemen. Grain warehouses in Chicago straddled a narrow bottleneck in the massive flow of grain from the farmers regions of the Plains to hungry urbanites along the Atlantic. A mere fourteen warehouses, too massive to be controlled even by the railroads, commanded the entire “trade in grain” from “seven or eight of the great States of the West [to] four or five of the States lying on the sea-shore.”⁵³ Wheat, “the king of all grains,”⁵⁴ has a global reach matched by few other crops.⁵⁵ One of the leading plants in humanity’s larder,⁵⁶ wheat is grown widely and shipped even further.⁵⁷ The fungible nature of grain and the need to commingle many producers’ output begat a private currency system, based on grain receipts, that was negotiable and redeemable among the city’s warehouse operators.⁵⁸ Confronted with the specter of a “‘virtual’ monopoly” over “the largest part of inter-state commerce” between the Plains and the East,⁵⁹ the Court upheld Illinois’s ceiling on “charges for the storage of grain in warehouses at Chicago.”⁶⁰

Later that Term, the celebrated *Granger Cases*⁶¹ ratified another innovation: state-law regulation of intrastate railroad rates. Insofar as rail

⁵² See, e.g., William J. Barron, *The Evolution of Smyth v. Ames: A Study of the Judicial Process*, 28 VA. L. REV. 761, 763–70 (1942); Herbert Hovenkamp, *The Cultural Crises of the Fuller Court*, 104 YALE L.J. 2309, 2335–37 (1995) (book review); Edmund W. Kitch & Clara Ann Bowler, *The Facts of Munn v. Illinois*, 1978 SUP. CT. REV. 313, 314 (1979); Stephen A. Siegel, *Lochner Era Jurisprudence and the American Constitutional Tradition*, 70 N.C. L. REV. 1, 96–99 (1991).

⁵³ *Munn*, 94 U.S. at 130–31.

⁵⁴ O.E. RÖLVAAG, *GIANTS IN THE EARTH* 110 (Lincoln Colcord & O.E. Rölvaag trans., 1927).

⁵⁵ See Jim Chen, *Filburn’s Legacy*, 52 EMORY L.J. 1719, 1757 (2003); cf. JAMES LONGMIRE & WALTER H. GARDINER, *ECON. RES. SERV., U.S. DEP’T OF AGRIC., LONG TERM DEVELOPMENTS IN TRADE IN FEED AND LIVESTOCK PRODUCTS* 2 (1984) (reporting that ninety percent of wheat traded internationally is used as food).

⁵⁶ See generally Robert Prescott-Allen & Christine Prescott-Allen, *How Many Plants Feed the World?*, 4 CONSERVATION BIOLOGY 365 (1990).

⁵⁷ See generally Moshe Feldman et al., *Wheats*, in *EVOLUTION OF CROP PLANTS* 184, 184–92 (J. Smartt & N.W. Simmonds eds., 2d ed. 1995).

⁵⁸ See *Munn*, 94 U.S. at 131.

⁵⁹ *Id.*

⁶⁰ *Id.* at 123.

⁶¹ See *Chi., Burlington & Quincy R.R. v. Iowa*, 94 U.S. 155 (1877); *Peik v. Chi. & N.W. Ry.*, 94 U.S. 164 (1877); *Chi. Milwaukee & St. Paul Ry. v. Ackley*, 94 U.S. 179 (1877); *Winona & St. Peter R.R. v. Blake*, 94 U.S. 180 (1877); *Stone v. Wisconsin*, 94 U.S. 181 (1877).

regulation was designed to benefit farmers as shippers of cheap, bulky commodities vis-à-vis city dwellers, rail regulation shared the political economy that impelled the passage of the warehouse law in *Munn*. In concert, *Munn* and the *Granger Cases* validated the cultural roots of a country that grew up on the farm and "moved to the city."⁶² These decisions authorized legislative efforts to ease the transition from an agrarian to an industrial economy. From the end of Reconstruction until World War II, the Supreme Court upheld many legislative efforts to tame "the various stockyards" and warehouses "of the country as great national public utilities" dominating "the flow of commerce from the ranges and farms of the West to the consumers in the East."⁶³

These decisions also foreshadowed the regulatory context that would eventually redefine the post-Civil War understanding of individual rights. That project had already begun in an agribusiness case that predated *Munn* and the *Granger Cases*. The 1873 *Slaughter-House Cases*⁶⁴ upheld Louisiana's police power over "noxious slaughter-houses" and the "large and offensive collections of animals" intended to feed the masses of greater New Orleans.⁶⁵ In repelling objections by aggrieved abattoirs, the *Slaughter-House Cases* focused the Reconstruction amendments on their original goal of protecting freed slaves.⁶⁶ The *Civil Rights Cases*⁶⁷ of 1883 invalidated the public accommodation provisions of the Civil Rights Act of 1875. Those provisions had been aimed at innkeepers and common carriers, the very businesses that *Munn* deemed to be "clothed with a public interest."⁶⁸ By

⁶² RICHARD HOFSTADTER, *THE AGE OF REFORM: FROM BRYAN TO F.D.R.* 23 (1955).

⁶³ *Stafford v. Wallace*, 258 U.S. 495, 516 (1922); *accord* *Chi. Bd. of Trade v. Olsen*, 262 U.S. 1, 34-36 (1923). The *Olsen* Court noted that commodity futures transactions:

on the Chicago Board of Trade are just as indispensable to the continuity of the flow of wheat from the West to the mills and distributing points of the East and Europe, as are the Chicago sales of cattle to the flow of stock toward the feeding places and slaughter and packing houses of the East.

Id. at 36.

⁶⁴ 83 U.S. (16 Wall.) 36 (1873).

⁶⁵ *Id.* at 64.

⁶⁶ *See id.* at 67-68 (1873); *Ex parte Virginia*, 100 U.S. 339, 344-35 (1880) ("One great purpose of these amendments was to raise the colored race from that condition of inferiority and servitude in which most of them had previously stood, into perfect equality of civil rights with all other persons within the jurisdiction of the States.").

⁶⁷ 109 U.S. 3 (1883).

⁶⁸ *Munn v. Illinois*, 94 U.S. 113, 126 (1877); *see also* Candeub, *supra* note 14, at 381-82; James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54

insisting that the Fourteenth Amendment affected solely "State action of a particular character" without reaching "[i]ndividual invasion of individual rights,"⁶⁹ the Supreme Court curbed Congress's power to punish "merely private conduct, however discriminatory or wrongful."⁷⁰ For their part, the state laws arising from the *Granger Cases* would eventually yield *Plessy v. Ferguson*.⁷¹

Within the specific context of economic regulation, *Munn*, the *Granger Cases*, and the "public interest" standard heralded a short-lived "legislative" age. The *Granger Cases* presaged the Interstate Commerce Act of 1887,⁷² which in turn established the federal model for command-and-control regulation of specific industries.⁷³ Well before the New Deal, the Supreme Court acknowledged Congress's power "to control . . . all [intrastate] matters having such a close and substantial relation to interstate traffic that [federal] control is essential or appropriate."⁷⁴ The *Shreveport Rate Cases*⁷⁵ of 1914 thus extended federal authority over intrastate railroad carriages with the potential to affect interstate commerce. Most important, *Munn* declined to prescribe judicial review, under any constitutional theory, as a palliative against ratemaking abuses: "the people must resort to the polls, not to the

FED. COMM. L.J. 225, 253–55 (2002); cf. JIM ROSSI, REGULATORY BARGAINING AND PUBLIC LAW 45 (2005) (describing the modern application of "ancient common law" duties that originally bound primordial "public utilities such as ferries, flour mills, and railroads").

⁶⁹ *Civil Rights Cases*, 109 U.S. at 11; cf. *United States v. Harris*, 106 U.S. 629, 640 (1882) (invalidating a federal anticonspiracy statute that was "directed exclusively against the action of private persons, without reference to the laws of the State or their administration by her officers").

⁷⁰ *Shelley v. Kraemer*, 334 U.S. 1, 13 (1948); accord, e.g., *United States v. Morrison*, 529 U.S. 598, 621 (2000); *District of Columbia v. Carter*, 409 U.S. 418, 423–24 (1973); *United States v. Guest*, 383 U.S. 745, 755 (1966); see *Civil Rights Cases*, 109 U.S. at 24–25; see also *id.* at 13–14 (holding that the Fourteenth Amendment limits Congress to enacting "corrective legislation . . . for counteracting" unconstitutional state laws).

⁷¹ 163 U.S. 537 (1896).

⁷² Act of Feb. 4, 1887, ch. 104, 24 Stat. 379.

⁷³ See, e.g., Marshall J. Berger & Gary J. Edles, *Established by Practice: The Theory and Operation of Independent Federal Agencies*, 52 ADMIN. L. REV. 1111, 1128 (2000); Kearney & Merrill, *supra* note 44, at 1325 ("The original [regulatory] paradigm was established over 100 years ago with the enactment in 1887 of the Interstate Commerce Act."); Robert L. Rabin, *Federal Regulation in Historical Perspective*, 38 STAN. L. REV. 1189, 1194–95 (1986).

⁷⁴ *Shreveport Rate Cases*, 234 U.S. 342, 351 (1914).

⁷⁵ 234 U.S. 342 (1914).

courts.”⁷⁶ As late as 1892, the Supreme Court suggested that federal courts lacked power to review utility or railroad rates set by the states.⁷⁷

2. The Judicial Phase

The “legislative” era heralded by *Munn* and the *Granger Cases* evaporated quickly. Within three decades, independent judicial review of law and facts enabled regulated firms to assail unfavorable ratemaking as unconstitutional confiscation.⁷⁸ The notoriously reactionary Supreme Court of the Gilded Age crafted a vigorously protective doctrine from *Munn*’s modest origins. The “confiscatory ratemaking” doctrine and the closely related “fair value” standard would eventually advance the ideology of economic due process.⁷⁹ Indeed, ratemaking controversies arguably represented “[t]he most significant cases in the [*Lochner*-era] Court’s campaign to expand the definition of property and takings.”⁸⁰

Justice David Brewer proved pivotal in envisioning confiscatory ratemaking as a taking.⁸¹ In *Reagan v. Farmers’ Loan & Trust Co.*,⁸² Justice Brewer not only asserted the power of judicial review over rates⁸³ but also argued that unfavorable rates would effectively confiscate utility property.⁸⁴ In *Monongahela Navigation Co. v. United States*,⁸⁵ Justice Brewer reviewed a federal statute that condemned a lock and dam and directed that just

⁷⁶ *Munn v. Illinois*, 94 U.S. 113, 134 (1877).

⁷⁷ *See Budd v. New York*, 143 U.S. 517, 546–48 (1892).

⁷⁸ *See Ohio Valley Water Co. v. Ben Avon Borough*, 253 U.S. 287, 289 (1920).

⁷⁹ *See, e.g., Smyth v. Ames*, 169 U.S. 466 (1898); *Reagan v. Farmers’ Loan & Trust Co.*, 154 U.S. 362 (1894); *Chi., Milwaukee & St. Paul Ry. v. Minnesota*, 134 U.S. 418 (1890). *See generally* John N. Drobak, *From Turnpike to Nuclear Power: The Constitutional Limits on Utility Rate Regulation*, 65 B.U. L. REV. 65 (1985); Robert L. Hale, *Does the Ghost of Smyth v. Ames Still Walk?*, 55 HARV. L. REV. 1116 (1942); Molly S. McUsic, *The Ghost of Lochner: Modern Takings Doctrine and Its Impact on Economic Legislation*, 76 B.U. L. REV. 605 (1996); Stephen A. Siegel, *Understanding the Lochner Era: Lessons from the Controversy over Railroad and Utility Rate Regulation*, 70 VA. L. REV. 187 (1984).

⁸⁰ McUsic, *supra* note 79, at 616.

⁸¹ *See, e.g.,* 2 JAMES BONBRIGHT, *VALUATION OF PROPERTY* 1095–96 (1937); Drobak, *supra* note 79, at 75–76, 80 n.65; Hale, *supra* note 79, at 1120; Siegel, *supra* note 79, at 216–23.

⁸² 154 U.S. 362 (1894).

⁸³ *See id.* at 399.

⁸⁴ *See id.* at 410.

⁸⁵ 148 U.S. 312 (1893).

compensation exclude the condemned corporation's state-law "franchise . . . to collect tolls."⁸⁶ Although the Court upheld Congress's power to condemn state franchises "even against [their] will," *Monongahela* held that Congress "can no more take the franchise which the State has given than it can any private property belonging to an individual."⁸⁷ As the Circuit Justice hearing the case that became *Smyth v. Ames*, Justice Brewer perfected the analogy between harsh ratemaking and eminent domain.⁸⁸

The whole Court eventually embraced Justice Brewer's campaign to distill the "principles of the takings clause" into a distinctive "constitutional ratemaking doctrine."⁸⁹ Justice Brewer's uncle, Justice Stephen Field, first murmured "confiscation" in his *Munn* dissent.⁹⁰ Chief Justice Waite intoned nine years after *Munn* that the "power to regulate is not a power to destroy, and limitation is not the equivalent of confiscation."⁹¹ The elder Justice Harlan, the eventual author of *Smyth*, acknowledged in 1896 that rates might be "so unjust as to destroy the value" of utility property.⁹² In 1897, one year before *Smyth*, the Court formally announced what its decisions by then had dictated: the Takings Clause of the Fifth Amendment had been incorporated into the Due Process Clause of the Fourteenth Amendment.⁹³

Legal history casts some doubt on this doctrinal progression. Bradley Karkkainen has persuasively argued that the purported incorporation of the Takings Clause never took place during the *Smyth* era, but rather in the 1978 case of *Penn Central Transportation Co. v. City of New York*.⁹⁴ For our purposes, what matters is not whether *Chicago, Burlington & Quincy Railroad Co. v. City of Chicago*⁹⁵ actually incorporated the Takings Clause, but whether the Supreme Court came to understand *Smyth* and *Chicago* as

⁸⁶ *Id.* at 313.

⁸⁷ *Id.* at 341. See generally Claeys, *supra* note 25, at 235–36 (describing *Monongahela*).

⁸⁸ See *Ames v. Union Pac. Ry.*, 64 F. 165, 177–78 (C.C.D. Neb. 1894), *aff'd sub nom.* *Smyth v. Ames*, 169 U.S. 466 (1898).

⁸⁹ Drobak, *supra* note 79, at 68.

⁹⁰ *Munn v. Illinois*, 94 U.S. 113, 142 (1877) (Field, J., dissenting).

⁹¹ *Railroad Comm'n Cases*, 116 U.S. 307, 331 (1886); *accord* *Chi., Milwaukee & St. Paul Ry. v. Minnesota*, 134 U.S. 418, 456 (1890); *In re Permian Basin Area Rate Cases*, 390 U.S. 747, 769 (1968).

⁹² *Covington & Lexington Tpk. Rd. Co. v. Sandford*, 164 U.S. 578, 597 (1896).

⁹³ See *Chi., Burlington & Quincy R.R. v. City of Chi.*, 166 U.S. 226, 239 (1897).

⁹⁴ *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104 (1978); see Bradley C. Karkkainen, *The Police Power Revisited: Phantom Incorporation and the Roots of the Takings Muddle*, 90 MINN. L. REV. 826 (2006).

⁹⁵ 166 U.S. 226 (1897).

imposing a federal constitutional restraint against state-law ratemaking decisions. Given a sufficiently persistent pattern of citations, law can turn even outrageous myth into history.⁹⁶ So it was with *Smyth*. Real or spurious, the rooting of the confiscatory ratemaking doctrine in the Takings Clause helped it survive the uprising against *Lochner*. This independent constitutional foundation shielded *Smyth* during “the demise of economic substantive due process.”⁹⁷

Whatever its doctrinal underpinnings, *Smyth* transmogrified the Court’s rhetoric. By 1904 Justice Harlan could speak casually, even in dissent, of “confiscatory rates.”⁹⁸ Even though neither the Supreme Court’s opinion in *Smyth* nor the circuit court opinion by Justice Brewer used any form of the word, “confiscation” became deeply, perhaps irretrievably, entrenched as the toughest “verbal workhorse in . . . utility regulation.”⁹⁹ It mattered little that “the Supreme Court did not exercise its authority to review rates extensively or make the standards more specific for 25 years.”¹⁰⁰ As a procedural matter, the mere “threat of judicial review . . . caus[ed] states to afford a full adversarial hearing on rate matters and to create expert agencies to carry out the task rather than do so by legislative action.”¹⁰¹ As contemporary law recognizes, the mere prospect of judicial review, as distinct from a presumption of unreviewability, can influence agency behavior even if a particular administrative decision would survive judicial scrutiny.¹⁰²

Smyth’s admittedly mythological allure packs enormous power within a regulatory culture in which “the opposing sides” of any debate “are as likely to be persuaded by mythology as by mathematics.”¹⁰³ The presence of William Jennings Bryan,¹⁰⁴ litigating a landmark case for Nebraska rather

⁹⁶ Cf. *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 531 (2005) (“On occasion, a would-be doctrinal rule or test finds its way into our case law through simple repetition of a phrase—however fortuitously coined.”).

⁹⁷ Drobak, *supra* note 79, at 68.

⁹⁸ *Int’l Postal Supply Co. v. Bruce*, 194 U.S. 601, 614 (1904) (Harlan, J., dissenting).

⁹⁹ Richard Goldsmith, *Utility Rates and “Takings,”* 10 ENERGY L.J. 241, 261 (1989).

¹⁰⁰ LOUIS SCHWARTZ, JOHN FLYNN & HARRY FIRST, *FREE ENTERPRISE AND ECONOMIC ORGANIZATION: GOVERNMENT REGULATION* 369 (6th ed. 1985).

¹⁰¹ *Id.*

¹⁰² See *Heckler v. Chaney*, 470 U.S. 821, 840–55 (1985) (Marshall, J., concurring in the judgment).

¹⁰³ Jim Chen, *Titanic Telecommunications*, 25 SW. U. L. REV. 535, 543 (1996).

¹⁰⁴ See Neil N. Bernstein, *Utility Rate Regulation: The Little Locomotive that Couldn’t*, 1970 WASH. U. L.Q. 223, 240. See generally MICHAEL KAZIN, *A GODLY HERO:*

than serving as President, magnified *Smyth*'s prominence within the "folklore" of regulation.¹⁰⁵ Through his vivid depiction of railroad ratemaking in *The Octopus*, novelist Frank Norris added *Smyth* to the American literary canon.¹⁰⁶ Far from strangling the railroad octopus, rate regulation fed the beast. The confiscatory ratemaking doctrine transformed rail regulation from Granger's boon to Granger's bane.

Finally, *Smyth* steered the substantive basis for ratemaking toward "the cost of providing the service" at issue "rather than some other basis," especially "the demand for the service."¹⁰⁷ For much of the next century, the ratemaking "methodology for establishing the cost of providing [utility] service" proceeded according to "a formula implicit in the *Smyth* opinion".¹⁰⁸

$$RR = OC + rB$$

where

RR represents the utility's revenue requirement.

OC represents operating costs.

B represents the rate base, consisting of utility property dedicated to public service.

r represents the rate of return on the rate base.

Of the three factors affecting a regulated firm's revenue requirement under *Smyth*, the task of determining the rate base posed the most "embarrassing question."¹⁰⁹ The Court responded with two words: *fair value*. *Smyth* held "that the basis of all calculations as to the reasonableness of rates . . . must be the fair value of property being used by it for the convenience of the public."¹¹⁰ To demystify this admittedly baffling formula, the Court offered a non-exhaustive list of criteria: "the original cost of construction, the amount expended in permanent improvements, the amount and market value of [the utility's] bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property . . . and the sum required to meet operating

THE LIFE OF WILLIAM JENNINGS BRYAN (2006).

¹⁰⁵ Richard D. Cudahy, *The Folklore of Deregulation (with Apologies to Thurman Arnold)*, 15 YALE J. ON REG. 427 (1998).

¹⁰⁶ See FRANK NORRIS, *THE OCTOPUS: A STORY OF CALIFORNIA* 67–70 (1901).

¹⁰⁷ SCHWARTZ ET AL., *supra* note 100, at 369.

¹⁰⁸ *Id.*

¹⁰⁹ *Smyth v. Ames*, 169 U.S. 466, 546 (1898).

¹¹⁰ *Id.* at 546.

expenses.”¹¹¹ Directed to the valuation of the rate base, arguably the most contentious query in cost-of-service regulation, *Smyth*’s fair value standard controlled ratemaking methodology in state and federal law as an unwavering constitutional command for nearly half a century.

“Although the fair value rule [gave] utilities strong incentive to manage their affairs well and to provide efficient service,”¹¹² it also defied judicial administration. Critics lamented that *Smyth* had consigned “[s]tate public utility regulation” to “a mode of procedure . . . contrary to that almost universally established under State law, and calculated seriously to embarrass the operation of the administrative method.”¹¹³ *Smyth*’s fair value standard represented public utility law’s expression of Heisenberg’s Uncertainty Principle.¹¹⁴ Rates hinged on a judicial determination of fair value, but no court could determine fair value without anticipating the rates the utility would earn.¹¹⁵ The circular rule invited endless litigation.¹¹⁶ Fair value eventually “degenerated to proofs about how much it would cost to reconstruct the [utility] asset in question, a hopelessly hypothetical, complex, and inexact process.”¹¹⁷ No other doctrine has ever contributed as much to the lament that “[t]he Supreme Power who conceived gravity, supply and demand, and the double helix must have been absorbed elsewhere when public utility regulation was invented.”¹¹⁸

¹¹¹ *Id.* at 546–47.

¹¹² *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 (1989); see also 1 ALFRED E. KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS* 109–16 (1970) (explaining how the fair value rule arguably yields the most socially efficient rates).

¹¹³ *Crowell v. Benson*, 285 U.S. 22, 92 n.28 (1932) (Brandeis, J., dissenting) (citation omitted).

¹¹⁴ Cf. Laurence H. Tribe, *The Curvature of Constitutional Space: What Lawyers Can Learn from Modern Physics*, 103 HARV. L. REV. 1, 17–23 (1989) (explaining, by analogy to quantum theory, how the mere act of applying constitutional doctrine irreversibly alters a decisionmaker’s perception of the underlying facts).

¹¹⁵ See, e.g., *Missouri ex rel. Sw. Bell Tel. Co. v. Pub. Serv. Comm’n*, 262 U.S. 276, 292 (1923) (Brandeis, J., concurring in the judgment); Robert L. Hale, *The “Fair Value” Merry-Go-Round, 1898 to 1938: A Forty-Year Journey from Rates-Based-on-Value to Value-Based-on-Rates*, 33 ILL. L. REV. 517 (1939); Siegel, *supra* note 79, at 246; cf. Gerard C. Henderson, *Railway Valuation and the Courts* (pt. 2), 33 HARV. L. REV. 1031, 1051 (1920) (describing fair value as a “juristic illusion”).

¹¹⁶ See, e.g., *Sw. Bell*, 262 U.S. at 299–301 (Brandeis, J., concurring in the judgment); John Bauer, *The Establishment and Administration of a “Prudent Investment” Rate Base*, 53 YALE L.J. 495, 499–501 (1944).

¹¹⁷ *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 n.5 (1989) (citing *Sw. Bell*, 262 U.S. at 292–94).

¹¹⁸ F.M. SCHERER, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE*

3. The Administrative Phase

A generation after *Smyth*, Justice Brandeis offered his cure for a ratemaking methodology that Chief Justice Stone denounced as “the most speculative undertaking . . . in the entire history of [Anglo-American] jurisprudence.”¹¹⁹ In the 1923 case of *Missouri ex rel. Southwestern Bell Telephone Co. v. Public Service Commission*,¹²⁰ Justice Brandeis advocated the prudent investment, or historical cost, approach to ratemaking. In lieu of estimating fair value according to the current replacement cost of utility assets, Justice Brandeis proposed that shareholders receive a reasonable return on all prudently invested capital, as measured by the historical “book value” of the utility’s rate base.¹²¹ All that the regulated firm has bargained for—and received—is a bond-like return. The government would owe nothing further.

As a substantive matter, Justice Brandeis’s prudent investment rule may have rested on a fundamental miscalculation regarding the future course of inflation.¹²² Justice Brandeis mistakenly predicted that “the peak price levels” experienced during World War I would undergo a “continuous decline[,]” as they had after the War of 1812 and the Civil War.¹²³ The American economy did no such thing. In retrospect, Justice Brandeis’s preference for the prudent investment rule rested on a historical accident: public utility law traces its origins to an era when inflation was largely unknown.¹²⁴ Indeed, the regulatory path since the New Deal would eventually expose the weaknesses of the prudent investment rule and revive the fair value rule, at least as regulatory policy if not as constitutional doctrine.

537 (1st ed. 1970); accord GERALD W. BROCK, TELECOMMUNICATION POLICY FOR THE INFORMATION AGE 20 (1994); Stuart Buck, *TELRIC vs. Universal Service: A Takings Violation?*, 56 FED. COMM. L.J. 1, 8 (2003).

¹¹⁹ *West v. Chesapeake & Potomac Tel. Co.*, 295 U.S. 662, 689 (1935) (Stone, J., dissenting).

¹²⁰ 262 U.S. 276 (1923).

¹²¹ See *id.* at 291 (Brandeis, J., concurring in the judgment).

¹²² See A.J.G. PRIEST, PRINCIPLES OF PUBLIC UTILITY REGULATION 504–05 (1969); Robert A. Webb, *Utility Rate Base Valuation in an Inflationary Economy*, 28 BAYLOR L. REV. 823, 832–33 & n.37 (1976). See generally Jim Chen, *The Price of Macroeconomic Imprecision: How Should the Law Measure Inflation?*, 54 HASTINGS L.J. 1375 (2003).

¹²³ *Missouri ex rel. Sw. Bell Tel. Co. v. Pub. Serv. Comm’n*, 262 U.S. 276, 304 n.16 (1923).

¹²⁴ Cf. *Williams v. United States*, 535 U.S. 911, 921 (2002) (Breyer, J., dissenting from denial of cert.) (describing “monetary inflation” as “a phenomenon familiar to the nation’s founders, but absent during much of the 19th Century”).

The administrative ease of the prudent investment rule nevertheless swayed converts. Within a decade, the Supreme Court noted that "its distinctive function in the enforcement of constitutional rights" counseled avoidance of "any artificial rule or formula which changed conditions might upset."¹²⁵ Justice Frankfurter complained bitterly that fair value was "useless as a guide for adjudication."¹²⁶ In the 1942 case of *Federal Power Commission v. Natural Gas Pipeline Co. of America*,¹²⁷ Chief Justice Stone's majority opinion not only held that "[t]he Constitution does not bind rate-making bodies to the service of any single formula or combination of formulas,"¹²⁸ but also equated the constitutional standard with the statutory "just and reasonable" formula of the Natural Gas Act and nearly every other regulatory statute.¹²⁹ Justices Black, Douglas, and Murphy nevertheless withheld their assent from the majority opinion in order to castigate the fair value rule as a fallacious "theory derive[d] from principles of eminent domain" that "have no place in rate regulation."¹³⁰

The end came swiftly. The landmark 1944 case of *Federal Power Commission v. Hope Natural Gas Co.*¹³¹ explicitly upheld a rate based on historical cost.¹³² Justice Douglas reduced the inquiry to one of effects rather than method: "It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry . . . is at an end."¹³³ So strongly did *Hope Natural Gas* appear to endorse Justice Brandeis's position that rate-of-return regulation "has been identified with historical cost ever since."¹³⁴ The

¹²⁵ *L.A. Gas & Elec. Corp. v. R.R. Comm'n*, 289 U.S. 287, 305 (1933).

¹²⁶ *Driscoll v. Edison Light & Power Co.*, 307 U.S. 104, 122 (1939) (Frankfurter, J., concurring).

¹²⁷ 315 U.S. 575 (1942).

¹²⁸ *Id.* at 586.

¹²⁹ *See id.*; *see also* *Permian Basin Area Rate Cases*, 390 U.S. 747, 770 (1968) (holding that "any rate selected by the Commission from the broad zone of reasonableness permitted by the [Natural Gas] Act cannot properly be attacked as confiscatory").

¹³⁰ *Natural Gas Pipeline*, 315 U.S. at 602-03 (Black, Douglas & Murphy, JJ., concurring in the judgment).

¹³¹ 320 U.S. 591 (1944).

¹³² *See id.* at 605.

¹³³ *Id.* at 602; *accord* *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 310, 314 (1989). *See generally* Robert L. Hale, *Utility Regulation in Light of the Hope Natural Gas Case*, 44 COLUM. L. REV. 488 (1944); Robert W. Harbeson, *The Demise of Fair Value*, 42 MICH. L. REV. 1049 (1944).

¹³⁴ *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 500 (2002).

regulatory consensus after *Hope Natural Gas* reached a “general agreement” that the historical cost methodology “was *primus inter pares*.”¹³⁵

Hope Natural Gas’s crushing blow ended the judicial phase in the law of regulated industries. One year after *Hope Natural Gas*, the Supreme Court squelched any suggestion that the nominal bar against confiscatory ratemaking obliges the government to guarantee a continuing stream of utility revenues in the face of exogenous competition or technological obsolescence. The 1945 case of *Market Street Railway Co. v. Railroad Commission*¹³⁶ observed that no agency is required “to fix rates . . . on an investment after it has vanished, even if once prudently made.”¹³⁷ As the Fifth Circuit summarized *Hope Natural Gas* and *Market Street Railway*: “The Fifth Amendment protects against takings; it does not confer a constitutional right to government-subsidized profits.”¹³⁸

By virtue of erasing nearly all traces of judicial control over valuation standards in ratemaking, *Hope Natural Gas* is widely considered to have ended public utility law’s distinctively judicial phase.¹³⁹ Both as an interpretation of the statutory ratemaking formula of “just and reasonable” rates and as the definitive constitutional case on confiscatory ratemaking, *Hope Natural Gas* has approached the status of holy writ.¹⁴⁰ Cases decided in the ensuing half-century confirmed *Hope Natural Gas*’s landmark status even though the methodology endorsed in that decision proved catastrophic. The 1954 decision in *Phillips Petroleum Co. v. Wisconsin*¹⁴¹ ordered the Federal Power Commission (FPC) to regulate wellhead sales of natural gas by independent producers to interstate pipelines. This flawed decision forced the federal government to set wholesale prices in a structurally competitive market utterly unsuited to cost-of-service regulation.¹⁴²

In the decades after *Phillips*, the FPC “labored with obvious difficulty to regulate a diverse and growing industry under the terms of an ill-suited

¹³⁵ *Id.* at 485.

¹³⁶ 324 U.S. 548 (1945).

¹³⁷ *Id.* at 567.

¹³⁸ *Alenco Communications, Inc. v. FCC*, 201 F.3d 608, 624 (5th Cir. 2000).

¹³⁹ *See, e.g., PHILLIPS, supra* note 20, at 181.

¹⁴⁰ *Cf. California v. FERC*, 495 U.S. 490, 499 (1990) (according great respect to “longstanding and well-entrenched decisions . . . interpreting statutes that underlie complex regulatory regimes”).

¹⁴¹ 347 U.S. 672 (1954).

¹⁴² *See generally* STEPHEN G. BREYER & PAUL W. MACAVOY, *ENERGY REGULATION BY THE FEDERAL POWER COMMISSION* 56–88 (1974); Richard J. Pierce, *Reconsidering the Roles of Regulation and Competition in the Natural Gas Industry*, 97 HARV. L. REV. 345 (1983).

statute.”¹⁴³ Cost-of-service regulation of wellhead gas became the “outstanding example . . . of the breakdown of the administrative process.”¹⁴⁴ As “intensely competitive vendors of a wasting commodity . . . acquired only by costly and often unrewarded search,” whose “unit costs may rise or decline with the vagaries of fortune,” gas producers “cannot usefully be classed as public utilities.”¹⁴⁵

In the 1968 *Permian Basin Area Rate Cases*,¹⁴⁶ the Court took a relaxed view of the constitutional constraints on ratemaking. The FPC subjected gas in the Permian Basin to two price ceilings: “one area maximum price for natural gas . . . dedicated to interstate commerce after January 1, 1961,” and “a second, and lower, area maximum price for all other natural gas produced in the Permian Basin.”¹⁴⁷ The FPC nevertheless “declined to calculate area rates from prevailing field prices.”¹⁴⁸ Rather, in an effort to determine the national and regional costs of “finding and producing gas-well gas,” the Commission “derived the maximum just and reasonable rate” from “composite cost data,” based on “published sources” and “cost questionnaires.”¹⁴⁹ Insofar as the resulting area rates balanced “the investor and the consumer interests” identified in the Natural Gas Act, the Court found them “constitutionally permissible.”¹⁵⁰ The *Permian Basin Cases* thus enabled the FPC to choose between individual rates for certain high-cost producers and area rates for all others.¹⁵¹

After *Permian Basin*, a name synonymous with extinction,¹⁵² the confiscatory ratemaking doctrine all but evaporated. Six years after that decision, the Court allowed the FPC to adopt “one level of just and reasonable rates for small producers and another for large producers,” again

¹⁴³ *Permian Basin Area Rate Cases*, 390 U.S. 747, 756 (1968).

¹⁴⁴ STAFF OF S. COMM. ON THE JUDICIARY, 86TH CONG., REPORT ON REGULATORY AGENCIES TO THE PRESIDENT-ELECT 54 (Comm. Print 1960); accord *Permian Basin*, 390 U.S. at 758.

¹⁴⁵ *Permian Basin*, 390 U.S. at 756–57.

¹⁴⁶ 390 U.S. 747 (1968).

¹⁴⁷ *Id.* at 759–60.

¹⁴⁸ *Id.* at 761.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 770 (quoting *Fed. Power Comm’n v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944)).

¹⁵¹ See *id.* at 768–74. See generally Edmund W. Kitch, *The Permian Basin Area Rate Cases and the Regulatory Determination of Price*, 116 U. PA. L. REV. 191 (1967).

¹⁵² See, e.g., MICHAEL J. BENTON, WHEN LIFE NEARLY DIED: THE GREATEST MASS EXTINCTION OF ALL TIME 9 (2003); D.H. Erwin, *The End-Permian Mass Extinction*, 21 ANN. REV. ECOLOGY & SYSTEMATICS 69 (1990).

without constitutional hesitation.¹⁵³ The Court erased any doubt on this point in a 1989 decision contesting a state public utility commission's refusal to base rates on a nuclear power plant whose construction was admittedly prudent when begun, but which had since failed to be "used and useful." *Duquesne Light Co. v. Barasch*¹⁵⁴ upheld the exclusion of amounts invested in the unused nuclear plant from the rate base: "Today we reaffirm [the] teachings of *Hope Natural Gas*."¹⁵⁵ Three concurring Justices stressed that "no single ratemaking methodology is mandated by the Constitution, which looks to the consequences a governmental authority produces rather than the techniques it employs."¹⁵⁶ Neither *Duquesne* nor any other Supreme Court decision "require[s] courts to engage in a takings analysis whenever an agency opens a previously regulated market to competition."¹⁵⁷ In substance if not in form, the Supreme Court of Ohio came perilously close in 1992 to stating the contemporary significance of the confiscatory ratemaking doctrine when it asserted that the "'Constitution no longer provides any special protection for the utility investor.'"¹⁵⁸

Duquesne affirmed *Hope Natural Gas*'s jurisprudential approach even as it revived *Smyth*'s substantive ratemaking methodology. *Duquesne* recognized that regulatory determinations of utility rates might benefit from "a return to some form of the fair value rule."¹⁵⁹ It had already become apparent that the then "emergent market for wholesale electric energy could provide a readily available objective basis for determining the value of utility assets."¹⁶⁰ *Duquesne* vividly illustrated the ongoing transformation of electricity regulation. Even as *Duquesne* enabled Pennsylvania to deny recovery of a utility's investment in an unused nuclear plant, the Court recognized that a viable wholesale market would enable regulators to value electric generation assets entirely without reference to historic investment.

In other words, even though *Smyth* erred in privileging judicial over legislative and administrative competence, that decision correctly embraced

¹⁵³ Fed. Power Comm'n v. Texaco Inc., 417 U.S. 380, 390 (1974).

¹⁵⁴ 488 U.S. 299 (1989).

¹⁵⁵ *Id.* at 310.

¹⁵⁶ *Id.* at 317 (Scalia, J., concurring). Justices White and O'Connor joined Justice Scalia's concurrence.

¹⁵⁷ Tex. Office of Pub. Util. Counsel v. FCC, 183 F.3d 393, 437 (5th Cir. 1999), *cert. denied*, 530 U.S. 1210, 1223 (2000), and *cert. dismissed*, 531 U.S. 975 (2000).

¹⁵⁸ Ohio Edison Co. v. Pub. Utils. Comm'n, 589 N.E.2d 1292, 1300 n.8 (Ohio 1992) (quoting Dayton Power & Light Co. v. Pub. Util. Comm'n, 447 N.E.2d 733, 740 (Ohio 1983)).

¹⁵⁹ *Duquesne*, 488 U.S. at 316 n.10.

¹⁶⁰ *Id.*

the fair value rule as a matter of substantive policy. The roots of this realization run at least as deep as *Hope Natural Gas*. In his dissent to that decision, Justice Jackson correctly predicted the impossibility of using a cost-based methodology to price natural gas. In gas production, Justice Jackson observed, the “service one renders to society . . . is measured by what” the producer “gets out of the ground, not by what he puts into it, and there is little more relation between the investment and the results than in a game of poker.”¹⁶¹ Although the prudent investment rule does measure, “at least roughly,” the “amount and quality of service rendered by [a] . . . utility” according to “the amount of capital it puts into the enterprise,” that rule “has no rational application where there is no such relationship between investment and capacity to serve.”¹⁶²

Justice Jackson’s conclusion in *Hope Natural Gas* resonates throughout the law of regulated industries. Where viable markets exist for infrastructure, regulatory estimates of prices should be based on those markets rather than some historic measure of cost. Although historic—or “sunk”—costs “are usually visible, . . . they should always be ignored when making economic decisions.”¹⁶³ Sunk costs differ in a critical respect from other forms of cost, especially “opportunity cost” in the sense of “the value of the best forgone alternative use” of resources.¹⁶⁴ All other notions of cost are partially or wholly forward-looking.¹⁶⁵ Insofar as “cost to an economist is a forward-looking concept,” costs already incurred “do not affect decisions on price and quantity.”¹⁶⁶ Because the “historical investments” in legacy networks are “sunk costs” and have no relevance to contemporary business decisions, prices in a competitive market react solely “to current costs.”¹⁶⁷ The need to ignore historic costs in making “current pricing decisions,” whether through competition or regulatory mechanisms designed to emulate competition, is “particularly significant in industries such as telecommunications which depend heavily on technological innovation.”¹⁶⁸ Forward-looking

¹⁶¹ Fed. Power Comm’n v. *Hope Natural Gas Co.*, 320 U.S. 591, 649 (1944) (Jackson, J., dissenting).

¹⁶² *Id.*

¹⁶³ ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS § 7.1, at 199 (2d ed. 1992).

¹⁶⁴ DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 56 (2d ed. 1994).

¹⁶⁵ *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 499 n.17 (2002).

¹⁶⁶ RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW § 1.1, at 7 (3d ed. 1986).

¹⁶⁷ *Alenco Communications, Inc. v. FCC*, 201 F.3d 608, 615 (5th Cir. 2000).

¹⁶⁸ *MCI Communications Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1117 (7th Cir. 1983).

ratemaking methodologies, based “on the costs an efficient carrier would incur (rather than the costs [that] incumbent carriers historically have incurred),” strongly “encourage carriers to act efficiently.”¹⁶⁹ Focusing on “forward-looking costs” to the exclusion of “historical, booked costs” represents a crucial legal commitment in managing “the transition from monopolistic to competitive” markets in historically regulated infrastructure industries.¹⁷⁰

By the time *Duquesne* reached the Supreme Court, this key insight had already penetrated the law of regulated industries. As of 1989, aggressive reform of many industries, including electricity, demanded unbundling of services to customers and imposed interconnection obligations vis-à-vis competitors “[i]n industries and segments where services ha[d] been bundled together through vertical and horizontal integration.”¹⁷¹ The common law did not oblige a common carrier to carry its competitors’ traffic.¹⁷² In 1886 the Supreme Court announced that “regulation of matters of this kind is legislative in its character, not judicial,” and any legal obligation to interconnect with competitors “must come, when it does come, from some source of legislative power.”¹⁷³

Roughly one century later, regulatory reformers enthusiastically seized this opportunity for legislative override. The Public Utility Regulatory Policies Act of 1978 (PURPA)¹⁷⁴ authorized the Federal Energy Regulatory Commission (FERC) to prescribe rules requiring electric utilities to purchase power from qualifying cogenerators and small power producers.¹⁷⁵ For a crucial five years after the Supreme Court upheld FERC’s decision to set the price for purchases of power generated by “qualifying facilities,” or “QFs,” at a rate equal to the full avoided cost of power that the purchasing utility

¹⁶⁹ *Tex. Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 407 (5th Cir. 1999), *cert. denied*, 530 U.S. 1210, 1223 (2000), and *cert. dismissed*, 531 U.S. 975 (2000).

¹⁷⁰ *Alenco*, 201 F.3d at 615.

¹⁷¹ *Kearney & Merrill*, *supra* note 44, at 1363–64.

¹⁷² *See Express Package Cases*, 117 U.S. 1, 21, 26–28 (1886); *see also Candeub*, *supra* note 14, at 385 (arguing that no case has ever “overturned the common law rule that railroads must accept traffic or freight at public junctions and depots from everyone, including competitors”); *cf. Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 611 n.44 (1985) (declining, almost exactly one century after the *Express Package Cases*, to resolve whether antitrust law requires firms with monopoly power to provide their competitors with access to “essential facilities”).

¹⁷³ *Express Package Cases*, 117 U.S. at 29.

¹⁷⁴ Pub. L. No. 95-617, 92 Stat. 3117.

¹⁷⁵ *See* 16 U.S.C. § 824a-3(a) (2000).

would otherwise have generated for itself,¹⁷⁶ FERC's full-avoided cost rule transformed PURPA's "statutory ceiling" into "the floor price" for wholesale electricity supplied by QFs.¹⁷⁷ PURPA thus "fueled the growth of a significant independent power producer sector, which challenged incumbent utility market power in electric power generation."¹⁷⁸

In 1988, a decade after PURPA, FERC abandoned the administrative determination of avoided cost in favor of competitive bidding.¹⁷⁹ Having prohibited "states [from] impos[ing] rates exceeding avoided cost,"¹⁸⁰ FERC also forswore its own determination of full avoided cost and instead allowed qualifying facilities to engage in competitive bidding.¹⁸¹ PURPA was eventually subsumed into the Energy Policy Act of 1992,¹⁸² which adopted a

¹⁷⁶ See *Am. Paper Inst., Inc. v. Am. Elec. Power Serv. Corp.*, 461 U.S. 402, 405 (1983).

¹⁷⁷ Steven J. Ferrey, *Shaping American Power: Federal Preemption and Technological Change*, 11 VA. ENVTL. L.J. 47, 78 (1991).

¹⁷⁸ ROSSI, *supra* note 68, at 62.

¹⁷⁹ See *Administrative Determination of Full Avoided Costs*, FERC Statutes & Regulations ¶ 32,457 (1988), summarized in 53 Fed. Reg. 9331 (1988); see also *Regulations Governing Bidding Programs*, 53 Fed. Reg. 9324 (1988); *Regulations Governing Independent Power Producers*, 53 Fed. Reg. 9327 (1988).

¹⁸⁰ *Orange & Rockland Utils., Inc.*, 43 F.E.R.C. ¶ 61,067, at 61,195 (1988), stayed, 43 F.E.R.C. ¶ 61,547, at 62,361 (1988), appeal dismissed sub nom. *Occidental Chem. Corp. v. FERC*, 869 F.2d 127 (2d Cir. 1989), dismissed as moot, 70 F.E.R.C. ¶ 61,014 (1995), reconsid. denied, 71 F.E.R.C. ¶ 61,034 (1995); see also *S. Cal. Edison Co.*, 70 F.E.R.C. 61,215 (1995), reconsid. denied, 71 F.E.R.C. ¶ 61,269 (1995); *Conn. Light & Power Co.*, 70 F.E.R.C. ¶ 61,012 (1995), reconsid. denied, 71 F.E.R.C. ¶ 61,035 (1995). For discussions of FERC's power under *Miss. Power & Light Co. v. Miss. ex rel. Moore*, 487 U.S. 354 (1988), and *Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953 (1986), to preempt state ratemaking, see Ferrey, *supra* note 177; Clinton A. Vince & John S. Moot, *Federal Preemption Versus State Utility Regulation in a Post-Mississippi Era*, 10 ENERGY L.J. 1 (1989).

¹⁸¹ See, e.g., *Pub. Serv. Co. v. N.H. Elec. Coop.*, 83 F.E.R.C. ¶ 61,224, at 61,995-96, 62,000-01 & n.20 (1998); *S. Cal. Edison Co.*, 70 F.E.R.C. ¶ 61,215, at 61,675-77 (1995), reconsid. denied, 71 F.E.R.C. ¶ 61,269, at 62,078-80 (1995); *Enron Power Enter. Corp.*, 52 F.E.R.C. ¶ 61,193 (1990); *Doswell Ltd. P'ship*, 50 F.E.R.C. ¶ 61,251 (1990).

¹⁸² Pub. L. No. 102-486, 106 Stat. 2776. For overviews of the 1992 Act's impact on PURPA and the electricity industry, see Jim Rossi, *Redeeming Judicial Review: The Hard Look Doctrine and Federal Regulatory Efforts to Restructure the Electric Utility Industry*, 1994 WIS. L. REV. 763; Joseph P. Tomain, *Electricity Restructuring: A Case Study in Government Regulation*, 33 TULSA L.J. 827 (1998); Jeffrey D. Watkiss & Douglas W. Smith, *The Energy Policy Act of 1992—A Watershed for Competition in the Wholesale Power Market*, 10 YALE J. ON REG. 447 (1993).

simpler, technologically neutral category of exempt wholesale generators¹⁸³ and expanded the scope of reform from generation to wholesale wheeling.¹⁸⁴

Throughout these regulatory changes, the jurisprudential sequence from *Smyth* through *Hope Natural Gas*, *Permian Basin*, and *Duquesne* has retained considerable importance. Even though the Supreme Court has never invalidated a rate as confiscatory since the Justices repudiated the constitutional underpinnings of the fair value rule, confiscatory ratemaking remains part of takings doctrine. *Duquesne* unequivocally stated that “the Constitution protects utilities from being limited to a charge for their property . . . which is so ‘unjust’ as to be confiscatory.”¹⁸⁵ The “power to regulate,” it bears remembering, “is not a power to destroy.”¹⁸⁶

4. Confiscation and Network Access

The interconnection and unbundling strategy that began with PURPA has revived interest in the confiscatory ratemaking doctrine. Obligations to interconnect and to sell network elements on an unbundled basis preserve the regulatory rigor once associated with the valuation of a utility’s rate base under conventional ratemaking. Contemporary regulation imposes “a new set of regulatory obligations . . . on the owners of [remaining] bottleneck facilities.”¹⁸⁷ Regulation of “those market segments that have [residual] natural monopoly characteristics” effectively imposes “new common carrier duties,” now directed “toward . . . competitors” rather than “traditional customers.”¹⁸⁸ This is not deregulation unbound; the Telecommunications Act and kindred statutes have “marked a shift towards a different style of regulation known as ‘access regulation.’”¹⁸⁹

Mandatory access requires regulators to set the price at which a

¹⁸³ See Administrative Determination of Full Avoided Costs, 63 Fed. Reg. 51,310, 51,311 (1998).

¹⁸⁴ See 16 U.S.C. §§ 824j, 824k (2000). Wheeling is the “transfer by direct transmission or displacement [of] electric power from one utility to another over the facilities of an intermediate utility.” *Otter Tail Power Co. v. United States*, 410 U.S. 366, 368 (1973).

¹⁸⁵ *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 307 (1989) (citing *Covington & Lexington Tpk. Rd. Co. v. Sandford*, 164 U.S. 578, 597 (1896)).

¹⁸⁶ *R.R. Comm’n Cases*, 116 U.S. 307, 331 (1886); accord *Covington*, 164 U.S. at 593 (1896); *Permian Basin Area Rate Cases*, 390 U.S. 747, 769 (1968).

¹⁸⁷ *Kearney & Merrill*, *supra* note 44, at 1364.

¹⁸⁸ *Id.*

¹⁸⁹ Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 CORNELL L. REV. 885, 890 (2003).

regulated incumbent must sell unbundled network elements to competitors requesting interconnection. Thanks to the transformation of the electricity market by PURPA and the Energy Policy Act, regulators may value a utility's generating capacity according to prevailing prices for an equivalent amount of power on the wholesale market and (rather pointedly) without reference to amounts historically invested in acquiring that capacity. This approach traces its origins not to the prudent investment approach advocated by Justice Brandeis, but rather to the fair value approach prescribed by *Smyth*.

Nowhere has this issue been more significant than the dispute over the Total Element Long-Run Incremental Cost Rule (TELRIC) used by the FCC to set the price at which incumbent local telephone companies must sell unbundled network elements to their competitors. The Telecommunications Act requires incumbent local exchange carriers (ILECs) to permit competitors to interconnect¹⁹⁰ and to offer unbundled network elements for sale.¹⁹¹ Rates for unbundled elements must be "just, reasonable, and nondiscriminatory."¹⁹² Those rates "may include a reasonable profit" and "shall be based on the cost . . . of providing the interconnection or network element."¹⁹³ But "cost" must be "determined without reference to a rate-of-return . . . proceeding."¹⁹⁴

In 1999 the Supreme Court upheld the FCC's authority to "design a pricing methodology" that could bind state regulators.¹⁹⁵ The FCC proceeded to price unbundled network elements according to "forward-looking economic cost."¹⁹⁶ This definition of cost represented "the sum of: (1) The total element long-run incremental cost of the element" and "(2) A reasonable allocation of forward-looking common costs."¹⁹⁷ The FCC defined "common costs" as "costs efficiently incurred in providing a group of elements . . . that cannot be attributed directly to individual elements."¹⁹⁸

In *Verizon Communications, Inc. v. FCC*,¹⁹⁹ the Supreme Court upheld

¹⁹⁰ See 47 U.S.C. § 251(c)(2) (2000).

¹⁹¹ See *id.* § 251(c)(3).

¹⁹² *Id.*

¹⁹³ *Id.* § 252(d).

¹⁹⁴ *Id.*

¹⁹⁵ *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 385 (1999).

¹⁹⁶ 47 C.F.R. § 51.505(a) (2005).

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* § 51.505(c)(1).

¹⁹⁹ 535 U.S. 467 (2002).

TELRIC.²⁰⁰ *Verizon* explicitly endorsed *Hope Natural Gas*, *Permian Basin*, and *Duquesne*.²⁰¹ Unlike earlier techniques, however, TELRIC is an overt, even aggressive, variant of the fair value rule. Rather than looking backward at an incumbent carrier's prudent investment, TELRIC prices network elements according to "the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent [carrier's] wire centers."²⁰² TELRIC's concept of "forward-looking economic cost" represents "something distinct from the kind of historically based cost generally relied upon in valuing a rate base after *Hope*."²⁰³ TELRIC reflects not the historical cost of a network, but rather the imputed "cost of operating a hypothetical network built with the most efficient technology available" to an incumbent carrier.²⁰⁴ Quite pointedly, TELRIC excludes all opportunity cost; "forward-looking economic cost," as defined by the FCC, does not include "opportunity costs" such as "the revenues that the incumbent LEC would have received for the sale of telecommunications services, in the absence of competition."²⁰⁵

In upholding TELRIC, the Supreme Court resurrected a regulatory truth that had been submerged by the founding mythology of the prudent investment rule. Justice Brandeis's formulation of the prudent investment rule and its endorsement in *Hope Natural Gas* have obscured the regulatory burden of historical cost. Rate-of-return regulation based on historical cost, not its fair value alternative, has become the ratemaking methodology that is hobbled by bad accounting and manipulative litigation. "It is now generally accepted that replacement cost is superior to historical cost as a measure of market value, because . . . '[a] competitive marketplace values assets, not at their historical price, but at their *replacement* value . . .'"²⁰⁶ As *Verizon* admitted, "the 'book' value or embedded costs of capital presented to traditional ratemaking bodies often [bear] little resemblance to the economic value of the capital."²⁰⁷

²⁰⁰ See generally Michael J. Legg, *Verizon Communications, Inc. v. FCC—Telecommunications Access Pricing and Regulator Accountability Through Administrative Law and Takings Jurisprudence*, 56 FED. COMM. L.J. 563 (2004).

²⁰¹ See *Verizon*, 535 U.S. at 483–84, 501–02, 524–25.

²⁰² 47 C.F.R. § 51.505(b)(1) (2005).

²⁰³ *Verizon*, 535 U.S. at 495.

²⁰⁴ *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 375 n.3 (1999).

²⁰⁵ 47 C.F.R. § 51.505(d)(3) (2005).

²⁰⁶ Spulber & Yoo, *supra* note 189, at 903 (alteration in original) (quoting STEPHEN BREYER, *REGULATION AND ITS REFORM* 38 (1982)).

²⁰⁷ *Verizon*, 535 U.S. at 517–18.

TELRIC addressed incumbent carriers' asymmetrical access to pricing information by "basing . . . valuation on the market price for most efficient elements."²⁰⁸ Incumbents enjoy no "unfair advantage" in proceedings over rates "figured by reference to a hypothetical element."²⁰⁹ The rule has dramatically improved state ratemaking cases, which historically were so dominated by incumbents that these proceedings epitomized regulatory capture. "TELRIC rate proceedings are surprisingly smooth-running affairs," essentially bloodless battles between "conflicting economic models supported by expert testimony" that typically end with state-law regulators adopting "some predictions from one model and others from its counterpart."²¹⁰ *Verizon* did not question the FCC's preference for TELRIC "over alternative fixed-cost schemes that preserve home-field advantages for the incumbents."²¹¹

In fairness, replacement cost might not always outperform historical cost as the basis for valuing utility assets. A regulated firm required to provide access to rivals might demand replacement cost if "the present 'cost' of a network . . . is much greater than" the "backwards-looking 'historical' costs" incurred "when the network was first erected."²¹² If the utility has ample capacity at the margin, as an electric utility would when it is required to grant access to its poles for the benefit of cable television and broadband operators, some rate of compensation besides market value should be constitutionally adequate.²¹³

This modest exception aside, constitutional doctrine is now settled. *Verizon* has endorsed *Duquesne*'s conclusion that "the fair value rule gives utilities strong incentive to manage their affairs well and to provide efficient service."²¹⁴ *Verizon* could not "say whether the passage of time will show competition prompted by TELRIC to be an illusion, but TELRIC appears to be a reasonable policy for now, and that is all that counts."²¹⁵ *Verizon* has ended any argument that the Telecommunications Act or the Constitution requires a regulatory agency to value utility assets according to historical cost for purposes of setting the price of unbundled network elements sold to an incumbent firm's competitors. There is no longer a "serious constitutional

²⁰⁸ *Id.* at 518.

²⁰⁹ *Id.*

²¹⁰ *Id.* at 522.

²¹¹ *Id.*

²¹² *Ala. Power Co. v. FCC*, 311 F.3d 1357, 1367 (11th Cir. 2002).

²¹³ *See id.* at 1370-71.

²¹⁴ *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 (1989).

²¹⁵ *Verizon*, 535 U.S. at 523.

question” whether any ratemaking “methodology [consciously] divorced from investment actually made will lead to a taking of property.”²¹⁶

B. Access Pricing Without Constitutional Constraint

1. The Fallacy of “Deregulatory Takings”

Although the law consists of “what the courts will do in fact, and nothing more pretentious,”²¹⁷ the absence of legal support rarely if ever constrains scholarly ingenuity. J. Gregory Sidak, Daniel Spulber, and Christopher Yoo have launched intricate but meritless efforts to revive robust judicial safeguards against allegedly confiscatory ratemaking. After elaborating their theories through law review articles,²¹⁸ Professors Sidak and Spulber advocated the reconstitutionalization of the law of regulated industries in *Deregulatory Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States*.²¹⁹ This 1997 book argued that the Constitution compels the government to compensate incumbent firms for losses attributable to changes in regulatory policy rather than unexpected economic circumstances or technological obsolescence.²²⁰ Under the terms of what the authors called an enforceable “regulatory contract” insulating regulated firms from official perfidy,²²¹ the appropriate remedy for governmental breach should be just compensation under the Takings Clause of the Constitution.²²²

²¹⁶ *Id.* at 523.

²¹⁷ Oliver Wendell Holmes, Jr., *The Path of the Law*, 10 HARV. L. REV. 457, 461 (1897), reprinted in 110 HARV. L. REV. 991, 994 (1997).

²¹⁸ See generally J. Gregory Sidak & Daniel F. Spulber, *Deregulatory Takings and Breach of the Regulatory Contract*, 71 N.Y.U. L. REV. 851 (1996); J. Gregory Sidak & Daniel F. Spulber, *The Tragedy of the Telecommons: Government Pricing of Unbundled Network Elements Under the Telecommunications Act of 1996*, 97 COLUM. L. REV. 1081 (1997); J. Gregory Sidak & Daniel F. Spulber, *Givings, Takings, and the Fallacy of Forward-Looking Costs*, 72 N.Y.U. L. REV. 1068 (1997); J. Gregory Sidak & Daniel F. Spulber, *Deregulation and Managed Competition in Network Industries*, 15 YALE J. ON REG. 117 (1998).

²¹⁹ J. GREGORY SIDAK & DANIEL F. SPULBER, *DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES* (1997).

²²⁰ *Id.* at 106–07.

²²¹ See *id.* at 268–72.

²²² See *id.* at 213–81. The Takings Clause provides that “private property” shall not “be taken for public use, without just compensation.” U.S. CONST. amend. V; cf. *First English Evangelical Lutheran Church v. County of Los Angeles*, 482 U.S. 304, 315

Professors Sidak and Spulber characterized regulated firms' "nonsalvageable investments" such as "an electrical generation plant or a telecommunications switch" as the very sort of reasonable "'investment-backed expectation' interest[s]" that the law should shield.²²³ Incumbent utilities will find it difficult or impossible to recover these costs should the "advent of competition" in electricity, telecommunications, and other network industries continue apace.²²⁴ So-called "stranded costs," known also "as 'transition costs,' . . . include utility companies' costs that were incurred prior to deregulation that are above market prices during deregulation and costs incurred in the transition from monopoly status to competitive market status."²²⁵

Deregulatory Takings objected in particular to mandatory interconnection and unbundling schemes typified by TELRIC. Mandatory access schemes expose incumbent utilities to potentially staggering stranded costs. In electricity, "stranded investment costs" often refer to costs that a transmission company "incurs due to any surplus in generation (or other) facilities resulting from the introduction of open access to its transmission services."²²⁶ As "current customers . . . take advantage of open access to purchase power from competing entities," the incumbent utility must manage "excess capacity and the costs which that entails."²²⁷

[W]hen a utility spends money to build power generation or transmission facilities it plans to use to serve the needs of a particular customer, and that customer takes its business elsewhere, the utility is suddenly left with more facilities than it needs to serve its remaining customers. Unless it can find a new customer to serve with its excess facilities, the money it spent on acquiring the new facilities will be "stranded."²²⁸

Incumbent telecommunications carriers have protested that TELRIC

(1987) (observing that just compensation is a remedy prescribed by constitutional text).

²²³ *SIDAK & SPULBER*, *supra* note 219, at 12 (quoting *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 124 (1978)).

²²⁴ *In re Passaic County Utils. Auth. Petition*, 728 A.2d 323, 327, 321 N.J. Super. 186, 194, *rev'd*, 753 A.2d 661, 164 N.J. 270 (1999); *see also* *Mass. Inst. of Tech. v. Dep't of Pub. Utils.*, 684 N.E.2d 585, 588, 425 Mass. 856, 858 n.4 (1997).

²²⁵ *N. Am. Natural Resources, Inc. v. Mich. Pub. Serv. Comm'n*, 41 F. Supp. 2d 736, 740 n. 3 (W.D. Mich. 1998).

²²⁶ *Cajun Elec. Power Coop., Inc. v. FERC*, 28 F.3d 173, 175 (D.C. Cir. 1994).

²²⁷ *Id.*

²²⁸ *Ass'n of Pub. Agency Customers, Inc. v. Bonneville Power Admin.*, 126 F.3d 1158, 1180 (9th Cir. 1997).

“does not incorporate their ‘historical’ or ‘embedded’ costs,” more precisely defined as costs that an incumbent “incurred in the past to build its local network and has not yet fully recovered” under state-law rates.²²⁹ TELRIC allegedly “underestimates their costs to provide interconnection and unbundled access and results in prices that are too low, effectively requiring [incumbents] to subsidize their new local service competitors.”²³⁰

In an effort to provide constitutional ammunition against these arrangements, Professors Sidak and Spulber have argued that “[m]andatory interconnection and unbundling constitute a government-ordered, physical invasion of the property of the incumbent regulated firm.”²³¹ *Deregulatory Takings* did not state an explicit legal basis. The phrase “deregulatory taking,” felicitous as it was fallacious, did not appear in a published federal judicial opinion before 1998.²³² To the extent that *Deregulatory Takings* asserted a claim under the Contracts Clause of the Constitution, it ran headlong into Supreme Court precedent “precisely to the contrary” of the untenable “proposition that such a contract . . . can be implied in the absence of an explicit right.”²³³ The Contracts Clause gives “public utility investors . . . precisely what they are able to bargain for, no more and no less.”²³⁴ If indeed government has committed contractual breach, “many terms of the regulatory deal are missing or unclear.”²³⁵

Not surprisingly, the phrases “deregulatory taking” and “regulatory contract,” when conscripted into action as actual legal arguments, have performed abysmally. One Arizona court rejected a claim that regulators had broken their “regulatory contract” with an incumbent telephone carrier.²³⁶

²²⁹ *Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 793 n.8 (8th Cir. 1997), *rev'd in relevant part sub nom. AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366 (1999).

²³⁰ *Id.*

²³¹ *SIDAK & SPULBER*, *supra* note 219, at 232.

²³² *See Bell Atl. Corp. v. United States*, 82 A.F.T.R.2d ¶ 98-7375, at 98-5606 (E.D. Pa. 1998); *Gulf Power Co. v. United States*, 998 F. Supp. 1386, 1394-95 (N.D. Fla. 1998); *see also* *ROSSI*, *supra* note 68, at 104-05.

²³³ Herbert Hovenkamp, *The Takings Clause and Improvident Regulatory Bargains*, 108 YALE L.J. 801, 812 (1999); *see also id.* at 811 (quoting Chief Justice Taney's statement that “in grants by the public, nothing passes by implication,” *Charles River Bridge v. Warren Bridge*, 36 U.S. (11 Pet.) 420, 546 (1837)); *id.* at 816-17 (“Literally dozens of times, . . . the Supreme Court has reiterated and consistently adhered to the *Charles River Bridge* prescription that contracts with the government are to be strictly construed against the grantee.”) (footnote omitted).

²³⁴ *Id.* at 816; *accord* *Claeys*, *supra* note 25, at 239.

²³⁵ *ROSSI*, *supra* note 68, at 116.

²³⁶ *See U.S. W. Communications, Inc. v. Ariz. Corp. Comm'n*, 3 P.3d 936, 197

Rejecting the carrier's argument that it enjoyed a "contractual" relationship with the state's corporation commission, the court observed that cases referring to a regulatory contract "speak[] descriptively or metaphorically," without establishing "an actual contract" or "contract remedies."²³⁷ A New York court has refused to grant stranded costs on a "regulatory compact" theory.²³⁸ Most devastatingly of all, a federal district court squarely rejected J. Gregory Sidak's contention, as an expert witness, that municipal franchises are contracts enforceable under state law.²³⁹

In a 2003 *Cornell Law Review* article cowritten with Christopher Yoo,²⁴⁰ Daniel Spulber resumed his campaign to constitutionalize the pricing rules governing mandatory interconnection and unbundled access. This article more clearly named its source of legal authority. Regimes mandating access to legacy networks and setting prices on unbundled elements, Professors Spulber and Yoo argue, should be subjected to the "physical takings" doctrine outlined in cases such as *Loretto v. Teleprompter Manhattan CATV Corp.*²⁴¹ In *Loretto*, a New York statute required rental property owners to acquiesce in the installation of cable equipment for the benefit of tenants. *Loretto* held that this scheme imposed "a permanent physical occupation authorized by government" and thereby effected "a taking without regard to the public interests that it may [have] serve[d]."²⁴² Professors Spulber and Yoo contend that this per se rule should govern mandatory access schemes.²⁴³

Its legal merits aside, *Loretto* provides intriguing facts suggestive of other Supreme Court decisions that supply the proper rule governing mandatory access. *Loretto* blended rent control with cable television. Economic regulation of rental housing has enjoyed a long history of presumed constitutionality. The real estate market is clothed with what *Munn* called the "public interest."²⁴⁴ Analogizing rate regulation with rent

Ariz. 16 (1999).

²³⁷ *Id.*, 3 P.3d at 941-42, 197 Ariz. at 21-22.

²³⁸ *See* Energy Ass'n v. Pub. Serv. Comm'n, 653 N.Y.S.2d 502, 513-14 (Sup. Ct. 1996).

²³⁹ *See* Bell Atl. Corp. v. United States, 82 A.F.T.R.2d ¶ 98-7375, at 98-7380 (E.D. Pa. 1998).

²⁴⁰ *See* Spulber & Yoo, *supra* note 189.

²⁴¹ 458 U.S. 419 (1982); *see also, e.g.*, *United States v. Pewee Coal Co.*, 341 U.S. 114 (1951); *United States v. General Motors Corp.*, 323 U.S. 373 (1945).

²⁴² *Loretto*, 458 U.S. at 426.

²⁴³ *See* Spulber & Yoo, *supra* note 189, at 947-59.

²⁴⁴ *See* *Bowles v. Willingham*, 321 U.S. 503, 517-18 (1944); *Block v. Hirsh*, 256 U.S. 135, 157 (1921).

control is admittedly difficult, especially in light of Justice Brandeis' assertion that valuation for ratemaking purposes cannot be equated with valuation in condemnation proceedings, even though both legal contexts are governed by the Takings Clause.²⁴⁵

Nevertheless, the Supreme Court has consistently declined to analyze residential rent control under *Loretto's* per se rule.²⁴⁶ "The government effects a physical taking only where it *requires* the landowner to submit to the physical occupation of his land."²⁴⁷ Rent control, however, even when combined with significant limit on the landlord's ability to convert property from indefinite occupation "at below-market rent," does not compel a "physical invasion of property."²⁴⁸ Unless a controversy fits one of "two relatively narrow categories," one for "permanent physical invasion[s]" and the other for "regulations that completely deprive an owner of 'all economically beneficial us[e]' of her property,"²⁴⁹ it falls under the more generous standard of *Penn Central Transportation Co. v. City of New York*.²⁵⁰ That test hinges on "the magnitude of a regulation's economic impact and the degree to which it interferes with legitimate property interests."²⁵¹

Even more directly on point, the Supreme Court rejected the application of *Loretto* in *FCC v. Florida Power Corp.*,²⁵² a 1987 case challenging the federal supervision of rates charged by incumbent owners of the utility poles that provided "the only practical physical medium for the installation of television cables."²⁵³ *Florida Power* concluded that *Loretto's* rule regarding

²⁴⁵ See *Missouri ex rel. Sw. Bell. Tel. Co. v. Pub. Serv. Comm'n*, 262 U.S. 276, 310–11 (1923) (Brandeis, J., concurring in the judgment).

²⁴⁶ See *Pennell v. City of San Jose*, 485 U.S. 1, 12 n.6 (1988) (declining to hold "that rent control is *per se* a taking").

²⁴⁷ *Yee v. City of Escondido*, 503 U.S. 519, 527 (1992).

²⁴⁸ *Id.*; see also *Fresh Pond Shopping Ctr., Inc. v. Callahan*, 464 U.S. 875 (1983) (dismissing an attempted use of *Loretto* to invalidate a rent control ordinance for failure to raise a substantial federal question).

²⁴⁹ *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 538 (2005) (emphasis in original) (quoting *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1019 (1992)).

²⁵⁰ 438 U.S. 108 (1978); cf. *Claeys*, *supra* note 25, at 207 (observing that the doctrinal frameworks for confiscatory ratemaking, physical occupation, and *Penn Central's* multifaceted test "exhaust all the important possibilities in takings law").

²⁵¹ *Lingle*, 544 U.S. at 540.

²⁵² 480 U.S. 245 (1987).

²⁵³ *Id.* at 247; cf. *Nat'l Cable & Telecomms. Ass'n, Inc. v. Gulf Power Co.*, 534 U.S. 327 (2002) (upholding the application of the Pole Attachment Act, 47 U.S.C. § 224, to pole attachments that provide high-speed Internet access over cable).

permanent physical occupations did not prevent the FCC from "review[ing] the rents charged by public utility landlords" and paid by "cable company tenants renting space on utility poles."²⁵⁴ In the context of utility interconnection, *Florida Power* confirms what rent control cases have established in the context of real estate.²⁵⁵ When "government . . . intervene[s] in the marketplace to regulate rates or prices that are artificially inflated," whether those rates govern housing or telecommunications, the appropriate constitutional framework is the lenient check against confiscatory ratemaking.²⁵⁶

These cases, including *Florida Power*, do provide the slightest opening for the per se rule governing physical occupations, and Professors Spulber and Yoo enthusiastically exploit the gap. Takings jurisprudence has not formally foreclosed the application of *Loretto* whenever the government compels a property owner, "over objection, to rent his property or to refrain in perpetuity from terminating a tenancy."²⁵⁷ The Court has, however, consistently distinguished constitutional constraints on ratemaking from the takings doctrine that governs physical occupations.²⁵⁸ Although some lower courts have applied the per se rule in cases requiring physical collocation of telecommunications equipment,²⁵⁹ these exceptional cases establish the primacy of *Hope Natural Gas*'s more relaxed standard in all other ratemaking settings. Indeed, one lower federal court has rejected the application of *Loretto* to access pricing, holding that "[t]here is no precedent for finding that the compulsory lease" of unbundled network elements "constitutes a 'physical taking'" of telephone company equipment.²⁶⁰ Another has rejected a takings challenge even as to the collocation

²⁵⁴ *Fla. Power*, 480 U.S. at 252.

²⁵⁵ See Paul W. Garnett, *Forward-Looking Costing Methodologies and the Supreme Court's Takings Clause Jurisprudence*, 7 COMMLAW CONSPPECTUS 119, 122 & n.19 (1999).

²⁵⁶ See *Pennell*, 485 U.S. at 11–12.

²⁵⁷ *Yee v. City of Escondido*, 503 U.S. 519, 528 (1992); see also *Fla. Power*, 480 U.S. at 251–52 n.6; cf. *Nollan v. Cal. Coastal Comm'n*, 483 U.S. 825, 831–32 (1987); *Fresh Pond Shopping Ctr., Inc. v. Callahan*, 464 U.S. 875, 877 (1983) (Rehnquist, J., dissenting).

²⁵⁸ See, e.g., *Fla. Power*, 480 U.S. at 252; *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, 601 (1944); *Fed. Power Comm'n v. Natural Gas Pipeline Co.*, 315 U.S. 575, 603 (1942).

²⁵⁹ See, e.g., *Bell Atl. Tel. Cos. v. FCC*, 24 F.3d 1441, 1445–46 (D.C. Cir. 1994); *GTE Nw. Inc. v. Pub. Util. Comm'n*, 900 P.2d 495, 504, 321 Or. 458, 474 (1995), *cert. denied*, 517 U.S. 1155 (1996).

²⁶⁰ *Qwest Corp. v. United States*, 48 Fed. Cl. 672, 694 (2001).

requirement.²⁶¹

Without regard to his scholarly partners, Daniel Spulber has adhered to a consistent position regarding the relative relevance of *Loretto* and *Hope Natural Gas* in ratemaking cases. From *Deregulatory Takings* in 1997 through his 2003 Cornell article, Professor Spulber has argued that the Constitution requires government to compensate legacy network owners for investments stranded by regulatory reform. The absence of legal support for this campaign has not spurred Professor Spulber to elaborate “the fine points of a principle that will,” in his apparently “confident” prognosis, “in time . . . command [judicial] support.”²⁶² Professor Spulber’s persistence from 1997 through 2003 surprisingly ignores the intervening 2002 decision in *Verizon Communications, Inc. v. FCC*.²⁶³ The Supreme Court’s latest word on TELRIC has reinforced the inapplicability of the physical takings doctrine to ratemaking, even in the context of mandatory interconnection and unbundled access. Tellingly, *Verizon* does not even mention *Loretto*; the Takings Clause framework that *Verizon* applied was that of *Hope Natural Gas*.

In their 2003 article, Professors Spulber and Yoo acknowledged the Court’s persistent distinction between physical takings and confiscatory ratemaking before proceeding to ignore it.²⁶⁴ This deliberate disregard for prevailing law demonstrates how the Takings Clause “has become the ‘last resort of constitutional arguments.’”²⁶⁵ Although *Florida Power* nominally declined to declare which takings standard would govern a law requiring interconnection and unbundled access,²⁶⁶ every other indication—especially *Verizon*’s striking silence—suggests that the Justices are disinclined to reconstitutionalize valuation standards in the fashion of *Smyth v. Ames*. Pending further notice, if a form of utility regulation has “satisf[ie]d the ‘end result’ test of *Hope*,” that policy will not “be subjected to some additional test for a ‘regulatory taking.’”²⁶⁷

We would reach this result even if we engaged takings jurisprudence through first principles and deductive reasoning.²⁶⁸ Attempts to

²⁶¹ See *GTE S. Inc. v. Morrison*, 6 F. Supp. 2d 517 (E.D. Va. 1998).

²⁶² *Garcia v. San Antonio Metro. Transit Auth.*, 469 U.S. 528, 580 (1985) (Rehnquist, J., dissenting).

²⁶³ 535 U.S. 467 (2002).

²⁶⁴ See Spulber & Yoo, *supra* note 189, at 934–36, 942–43.

²⁶⁵ *Pineman v. Fallon*, 842 F.2d 598, 602 (2d Cir. 1988) (quoting *Buck v. Bell*, 274 U.S. 200, 208 (1927)).

²⁶⁶ See *FCC v. Fla. Power Corp.*, 480 U.S. 245, 251–52 n.6 (1987).

²⁶⁷ Goldsmith, *supra* note 99, at 256.

²⁶⁸ Cf. Michael Stokes Paulsen, *The Most Dangerous Branch: Executive Power to Say What the Law Is*, 83 GEO. L.J. 217, 226 (1994) (embracing a “Euclidian”

constitutionalize a single ratemaking rule are “tethered neither to the text of the Takings Clause nor to the basic justification for [reviewing] regulatory actions” under that clause.²⁶⁹ The overarching purpose of the Takings Clause—“to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole”²⁷⁰—has no real meaning in ratemaking.²⁷¹ “[R]ate regulators do not allocate burdens between the ‘public’ on the one hand and the ‘few’ on the other”; they balance “the cost of utility service between large classes of investors and consumers.”²⁷² Utility investors enjoy an overwhelming advantage in information, wealth, and political sophistication.²⁷³ Their superior ability to bear risk and to mitigate damage from unforeseen contingencies are the very attributes that justify the imposition of liability in virtually every other context.²⁷⁴ To shift the risk of legal change onto ratepayers would perversely invite investors to enter as many regulatory arrangements as possible, the better to secure public indemnification “against the risks of changing technology and new entrants.”²⁷⁵

The substantial intellectual veneer of the campaign to reconstitutionalize ratemaking masks an even more impressive absence of legal support. For their trouble, Professors Sidak, Spulber, and Yoo have done little more than identify a judicial mirage, “appearing to some [observers] but not to others, and assuming any form desired by the beholder.”²⁷⁶ Annoying as the habit

methodology that accepts “certain basic postulates concerning [constitutional] structure and political theory” and deduces doctrines as though they were theorems).

²⁶⁹ *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 529 (2005).

²⁷⁰ *Armstrong v. United States*, 364 U.S. 40, 49 (1960); *accord, e.g., Lingle*, 544 U.S. at 537; *Pennell v. City of San Jose*, 485 U.S. 1, 9 (1988); *Agins v. City of Tiburon*, 447 U.S. 255, 260 (1980).

²⁷¹ See ROSSI, *supra* note 68, at 112 (arguing that this formula is “not a central concern in utility regulation”).

²⁷² Goldsmith, *supra* note 99, at 255; *see also Gulf States Utils. Co. v. La. Pub. Serv. Comm’n*, 578 So. 2d 71, 116 (La. 1991) (observing that confiscatory ratemaking occurs only when the government “fail[s] to consider the legitimate interests of the utility and its investors . . . and to weigh those interests against the competing concerns of ratepayers” (emphasis added)).

²⁷³ See Jim Rossi, *The Irony of Deregulatory Takings*, 77 TEX. L. REV. 297, 318 (1998).

²⁷⁴ See Timothy J. Brennan & James Boyd, *Stranded Costs, Takings, and the Law and Economics of Implicit Contracts*, 11 J. REG. ECON. 41, 43 (1997); James Boyd, *The “Regulatory Compact” and Implicit Contracts: Should Stranded Costs Be Recoverable?*, ENERGY J., 1998, at 69 (1998).

²⁷⁵ Rossi, *The Irony of Deregulatory Takings*, *supra* note 273, at 316.

²⁷⁶ *Indus. Union Dep’t v. Am. Petroleum Inst.*, 448 U.S. 607, 681 (1980)

may be, the Supreme Court retains its freedom to disregard arguments "supported by all the law professors in the land."²⁷⁷ The high court, presumably the exclusive arbiter of its own precedents,²⁷⁸ continues to distinguish "the *per se* rule of *Loretto*" from the "constitutional calculus of reasonableness" based on "traditional Fifth Amendment standards," especially as they govern the "regulation of maximum rates or prices."²⁷⁹

Even if *Loretto* did govern mandatory access schemes, this change in takings law would have no material impact. Professors Spulber and Yoo wield *Loretto* as if it were *Lochner* unplugged, an intellectually dignified alternative to the discredited ideology of economic due process.²⁸⁰ Substantive due process, in any event, is an independent constitutional constraint with "no proper place in . . . takings jurisprudence."²⁸¹ Unlike a violation of substantive due process, official action that effects a taking may still proceed as long as the private property in question is "taken for public use" and the government provides "just compensation."²⁸² The former constraint is practically nonexistent; the latter merely reframes judicial review of ratemaking as a question of "just compensation" rather than the existence *vel non* of a taking. The Takings Clause "does not bar government from interfering with property rights"; it simply "requires compensation 'in the event of *otherwise proper interference* amounting to a taking.'"²⁸³

Under the lenient definition delivered in *Hawaii Housing Authority v. Midkiff*,²⁸⁴ "[t]he 'public use' requirement is . . . coterminous with the scope of a sovereign's police powers."²⁸⁵ In its most recent case on point, the

(Rehnquist, J., concurring in the judgment).

²⁷⁷ *Plaut v. Spendthrift Farm, Inc.*, 514 U.S. 211, 228 (1995); *see also* *Kazmier v. Widmann*, 225 F.3d 519, 531 (5th Cir. 2000) ("[T]he support of even [a] prominent . . . academician is an inadequate substitute for . . . recent Supreme Court precedent."); *Velasquez v. Frapwell*, 160 F.3d 389, 394 (7th Cir. 1998) (noting that the Supreme Court's opinion is the law, "whatever law professors or even professional historians may say"), *vacated*, 165 F.3d 593 (7th Cir. 1999).

²⁷⁸ *See* *State Oil Co. v. Kahn*, 522 U.S. 3, 20 (1997); *Agostini v. Felton*, 521 U.S. 203, 237 (1997); *Am. Trucking Ass'ns, Inc. v. Smith*, 496 U.S. 167, 180 (1990) (plurality opinion); *Rodriguez de Quijas v. Shearson/Am. Express, Inc.*, 490 U.S. 477, 484 (1989).

²⁷⁹ *FCC v. Fla. Power Corp.*, 480 U.S. 245, 253 (1987).

²⁸⁰ *See* *Lochner v. New York*, 198 U.S. 45 (1905).

²⁸¹ *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 540 (2005).

²⁸² U.S. CONST. amend. V.

²⁸³ *Lingle*, 544 U.S. at 543 (quoting *First English Evangelical Lutheran Church v. County of Los Angeles*, 482 U.S. 304, 315 (1987) (emphasis added)).

²⁸⁴ 467 U.S. 229 (1984).

²⁸⁵ *Id.* at 240.

Supreme Court reaffirmed that "public use jurisprudence has wisely eschewed rigid formulas and intrusive scrutiny in favor of affording legislatures broad latitude in determining what public needs justify the use of the takings power."²⁸⁶ Where any "exercise of the eminent domain power is rationally related to a conceivable public purpose, the Court has never held a compensated taking to be proscribed by the Public Use Clause."²⁸⁷ Under a takings doctrine that allows "the government's pursuit of a public purpose" to "benefit individual private parties,"²⁸⁸ open access in the name of subjecting an entrenched monopolist to competition will surely suffice.²⁸⁹

The lone constitutional issue that remains is whether network elements offered through mandatory access are adequately priced. That was the question presented in *Verizon*, and whether one reaches it through the confiscatory ratemaking doctrine or *Loretto*'s per se rule makes no difference. Even a categorical concession that mandatory access effects a per se taking does not answer the "real question": whether the regulatory "price structure" represents "just compensation or not."²⁹⁰ That query leads inexorably to the deferential standard of *Hope Natural Gas* and *Duquesne*; as one critic of TELRIC has conceded, a court applying *Loretto* must eventually "consult the confiscatory rate doctrine."²⁹¹ Even if they are "inapposite" in determining whether a taking has occurred, "rate-of-return principles" control the question of what compensation would be just.²⁹²

The amount ultimately awarded to the prevailing landlord in *Loretto* was a single dollar.²⁹³ One dollar was what the state cable commission initially offered, and it remained the measure of just compensation throughout the litigation.²⁹⁴ Installing cable infrastructure affirmatively enhanced the

²⁸⁶ *Kelo v. City of New London*, 125 S. Ct. 2655, 2664 (2005).

²⁸⁷ *Midkiff*, 467 U.S. at 241.

²⁸⁸ *Kelo*, 125 S. Ct. at 2666.

²⁸⁹ *Cf. Berman v. Parker*, 348 U.S. 26, 33 (1954) ("If those who govern the District of Columbia decide that the Nation's Capital should be beautiful as well as sanitary, there is nothing in the Fifth Amendment that stands in the way.").

²⁹⁰ Buck, *supra* note 118, at 36.

²⁹¹ *Id.*; see also Claey's, *supra* note 25, at 236-37.

²⁹² Buck, *supra* note 118, at 37.

²⁹³ See *A \$1 Cable Fee for TV Hookup Upheld by State*, N.Y. TIMES, May 9, 1983, at B3; Candeub, *supra* note 14, at 429.

²⁹⁴ See *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 423-24 (1982) (reporting that New York's cable television commission had originally "ruled that a one-time \$1 payment is the normal fee to which a landlord is entitled" for the physical intrusion attributed to the cable); *Loretto v. Teleprompter Manhattan CATV Corp.*, 446 N.E.2d 428, 431 (N.Y. 1983) (remanding the case for further consideration by the cable

disputed apartments' value, and nominal damages discharged any governmental obligation to the landlord. In the context of mandatory access, the payment of an adequate rate for unbundled network elements should extinguish all constitutional objections. Neither *Loretto* nor the confiscatory ratemaking doctrine impairs the inherent police power to force interconnection and unbundled access. Takings doctrine merely defines the circumstances under which just compensation must issue and the amount of compensation that would be "just." The proper measure of just compensation, as *Loretto* illustrates, may be minimal.

2. Simply Priceless

No pricing rule associated with a mandatory access scheme has ever been ruled unconstitutional. In light of such futility, one must question why Gregory Sidak, Daniel Spulber, and Christopher Yoo have struggled so mightily and so fruitlessly to reconstitutionalize ratemaking. The bootless attempt to cram regulatory valuation standards into *Loretto*'s physical takings doctrine stems from an apparent desire to establish putatively "market-based" prices as the benchmark for network elements provided by an incumbent to its competitors.²⁹⁵ This plea represents merely the latest manifestation of a longstanding quest to subject all regulatory pricing to the efficient component pricing rule (ECPR).²⁹⁶ The principal distinction between the ECPR and TELRIC's forward-looking approach is that the ECPR would compensate an incumbent for the opportunity cost lost through compulsory transactions with competitors, particularly revenues that the incumbent would have received had the law never undertaken to stimulate competitive alternatives. The ECPR states in formal terms what Eric Claeys has tentatively suggested as a baseline for pricing network elements acquired through the Telecommunications Act's mandatory access provisions: the

commission).

²⁹⁵ See Spulber & Yoo, *supra* note 189, at 949–58.

²⁹⁶ See generally, e.g., WILLIAM J. BAUMOL & J. GREGORY SIDAK, TOWARD COMPETITION IN LOCAL TELEPHONY 95–97 (1994); SIDAK & SPULBER, *supra* note 219, at 283–305; Alfred E. Kahn & William E. Taylor, *The Pricing of Inputs Sold to Competitors: A Comment*, 11 YALE J. ON REG. 225, 228–30 (1994); Jean-Jacques LaFont & Jean Tirole, *Access Pricing and Competition*, 38 EUR. ECON. REV. 1673 (1994); Alexander C. Larson & Dale E. Lehman, *Essentiality, Efficiency, and the Efficient Component-Pricing Rule*, 12 J. REG. ECON. 71 (1997); Robert D. Willig, *The Theory of Network Access Pricing*, in ISSUES IN PUBLIC UTILITY REGULATION 109 (Harry M. Trebing ed., 1979); Robert D. Willig, William J. Baumol & Janusz A. Ordover, *Parity Pricing and its Critics: A Necessary Condition for Efficiency in Provision of Bottleneck Services to Competitors*, 14 YALE J. ON REG. 145 (1997).

“discounted present value of the rates” that incumbent carriers would have “expected to recover in each state” had Congress never passed the Act and had the FCC never adopted TELRIC.²⁹⁷ By contrast, TELRIC’s definition of “forward-looking economic cost” excludes “opportunity costs” such as “the revenues that the incumbent LEC would have received . . . in the absence of competition.”²⁹⁸

True to the admonition that the law must distinguish “what is economically wise” from that which is “legally permissible,”²⁹⁹ I shall not seriously dispute the ECPR as policy.³⁰⁰ Confiscatory ratemaking jurisprudence has unequivocally announced that regulators are “not bound to the use of any single formula or combination of formulae in determining rates.”³⁰¹ “The balance of advantage[s]” among ratemaking methodologies “is sufficiently close that . . . current constitutional strictures” grant an ample regulatory zone of discretion.³⁰² It is certainly within the realm of reasoned argument to defend the ECPR on the grounds that compensating today’s incumbents, who, after all, were yesterday’s entrants, will encourage tomorrow’s innovators to develop infrastructure.³⁰³ Moreover, consistent with the insight that shared property is more expensive to define in the first instance and to patrol over the long haul,³⁰⁴ regulators may spurn forced access, especially if regulatory prices for legacy infrastructure are stingy, as an invitation to fierce, wasteful litigation.³⁰⁵

²⁹⁷ Claey's, *supra* note 25, at 239.

²⁹⁸ 47 C.F.R. § 51.505(d)(3) (2005).

²⁹⁹ Fed. Power Comm’n v. Hope Natural Gas Co., 320 U.S. 591, 652 (1944) (Jackson, J., concurring).

³⁰⁰ Cf. Candeub, *supra* note 14, at 429 (inviting the reader to “[a]ssume that [the ECPR] is legally and economically unassailable”).

³⁰¹ *Hope Natural Gas*, 320 U.S. at 602.

³⁰² Richard A. Epstein, *Takings, Commons, and Associations: Why the Telecommunications Act of 1996 Misfired*, 22 YALE J. ON REG. 315, 338 (2005).

³⁰³ See, e.g., Douglas Lichtman & Randal C. Picker, *Entry Policy in Telecommunications: Iowa Utilities and Verizon*, 2002 SUP. CT. REV. 41, 67 (2003); Allan T. Ingraham & J. Gregory Sidak, *Mandatory Unbundling, UNE-P, and the Cost of Equity: Does TELRIC Pricing Increase Risk for Incumbent Local Exchange Carriers?*, 20 YALE J. ON REG. 389, 404 (2003).

³⁰⁴ See, e.g., Robert C. Ellickson, *Property in Land*, 102 YALE L.J. 1315, 1382 (1993); cf. Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 134 (1998) (observing how crows, evidently aware of property’s high cost, “dispense with their normal territoriality when food is plentiful”). See generally Harold Demsetz, *Towards a Theory of Property Rights*, 57 AM. ECON. REV. 347 (1967).

³⁰⁵ See Michael A. Heller, *The UNE Anticommons: Why the 1996 Telecom Reforms*

By the same token, no court conscious of regulation's dynamic impact—let alone the law's repudiation of a judicially dominated approach to ratemaking—would ever constitutionalize the ECPR. Among ratemaking methodologies, the ECPR is hardly the reformer's choice. Compensating incumbents for lost business perpetuates the high prices and diminished output that characterize any monopoly, and legal endorsement of an incumbent monopolist's expected income stream will almost certainly strangle downstream innovation.³⁰⁶ At worst, the ECPR awards “full pre-entry profits, all the way up to the full monopoly level.”³⁰⁷ The resulting technological “lock-in” is inimical to every progressive instinct animating this dynamic field.³⁰⁸ As Professors Sidak and Spulber have admitted, “legal analogies to physical invasion of real property” lose their power “[a]s value in the economy arises to a greater relative extent from intellectual property and information-based assets than from land.”³⁰⁹ It is almost banal to say that firms today accrue much of their value in “intangible resources” such as “ideas, know-how, information, inventions, goodwill, and the like.”³¹⁰

The ECPR is most attractive when legacy networks successfully exploit geography and other physical determinants of productivity that have retained their importance in an information-based economy.³¹¹ The ECPR is more popular in settings that put a lower premium on innovation, such as railroads and water markets. Within telecommunications, the ECPR may provide a

Blocked Innovation and Investment, 22 YALE J. ON REG. 275, 285 (2005).

³⁰⁶ See, e.g., Nicholas Economides & Lawrence J. White, *Access and Interconnection Pricing: How Efficient is the Efficient Component Pricing Rule?*, 40 ANTITRUST BULL. 557 (1995); Nicholas Economides & Lawrence J. White, *The Inefficiency of the ECPR Yet Again: A Reply to Larson*, 43 ANTITRUST BULL. 429 (1998).

³⁰⁷ Nicholas Economides, *The Tragic Inefficiency of the M-ECPR*, in DOWN TO THE WIRE: STUDIES IN THE DIFFUSION OF TELECOMMUNICATIONS TECHNOLOGIES 140, 144 (Allan L. Shampine ed., 2003); accord Candeub, *supra* note 14, at 425.

³⁰⁸ See generally Daria Roithmayr, *Barriers to Entry: A Market Lock-in Model of Discrimination*, 86 VA. L. REV. 727 (2000); Daria Roithmayr, *Locked in Inequality: The Persistence of Discrimination*, 9 MICH. J. RACE & L. 31 (2003); Daria Roithmayr, *Locked in Segregation*, 12 VA. J. SOC. POL'Y & L. 197 (2004).

³⁰⁹ SIDAK & SPULBER, *supra* note 219, at 3.

³¹⁰ Dan L. Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3, 7 (2004); cf. Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104, 130 (1978) (“‘Taking[s]’ jurisprudence does not divide a single parcel into discrete segments and attempt to determine whether rights in a particular segment have been entirely abrogated.”).

³¹¹ See, e.g., RICHARD FLORIDA, *THE RISE OF THE CREATIVE CLASS . . . AND HOW IT'S TRANSFORMING WORK, LEISURE, COMMUNITY AND EVERYDAY LIFE* 6 (2002) (“Place has become the central organizing unit of our time, taking on many of the functions that used to be played by firms and other organizations.”).

useful baseline for reforming the formula by which incumbent LECs charge other carriers for completing phone calls over legacy wireline networks. The ECPR may allow a “monopoly or bottleneck infrastructure provider and its customers to negotiate agreements about access charges and related issues,” presumably after regulators have already opened the network for the benefit of competitors.³¹² The ECPR also ensures that “vertically unbundled industries produce their services using their most efficient components,” a regulatory objective reflecting the same efficiency concerns underlying Ramsey pricing.³¹³

This seemingly abstract debate over the constitutional dimensions of ratemaking has real consequences. Of the three available pricing rules—fair value, prudent investment, and the ECPR—the ECPR is likeliest to set network element prices at the highest level, while TELRIC’s interpretation of fair value would probably yield the lowest prices. Adopting the ECPR would preemptively award stranded costs to incumbents and thereby throttle structural reform of utility markets. Though it offends incumbent carriers and their shareholders, TELRIC pointedly excludes opportunity costs from its definition of “forward-looking economic cost.”³¹⁴ Barring administrative abandonment or legislative repeal, TELRIC is the law of the land.

Much of the frustration with TELRIC arises from its assumption that incumbents should bear the brunt of a regulatory transition. Those losses may indeed be economically significant. Incumbents, however, have not endured constitutionally cognizable *legal* injury. The rhetoric of “deregulatory takings” erroneously assumes that mandatory access has cost incumbent utilities a sacrosanct right to exclude. Although the common law did not compel common carriers to carry their competitors’ traffic,³¹⁵ the FCC has required local exchange carriers “to connect interexchange carriers” and to fulfill “a duty of access to customers.”³¹⁶ Historically speaking, local telephone franchises—preempted since 1996 insofar as they “prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service”³¹⁷—rarely granted

³¹² GÓMEZ-IBÁÑEZ, *supra* note 2, at 260.

³¹³ *Id.* On the pricing methodology traceable to Frank P. Ramsey, *A Contribution to the Theory of Taxation*, 37 *ECON. J.* 47 (1927), see generally *Burlington N. R.R. Co. v. ICC*, 985 F.2d 589, 596 (D.C. Cir. 1993); William P. Rogerson, *New Economic Perspectives on Telecommunications Regulation*, 67 *U. CHI. L. REV.* 1489, 1491–92 (2000).

³¹⁴ See 47 C.F.R. § 51.505(d)(3) (2005).

³¹⁵ See sources cited *supra* note 172.

³¹⁶ Claeys, *supra* note 25, at 228; see also *id.* at 232.

³¹⁷ 47 U.S.C. § 253(a) (2000).

exclusivity, but rather gave “permissive authorization” to build local exchanges.³¹⁸

It is worth consulting wisdom from a setting distinct from this one but not so distant as to be irrelevant.³¹⁹ Section 9 of the Endangered Species Act makes it unlawful to “take any [endangered] species.”³²⁰ Section 10 authorizes incidental take permits upon approval of a habitat conservation plan.³²¹ Officials seeking to temper section 9’s perceived harshness have granted section 10 permits to blunt the perverse incentive to “shoot, shovel, and shut up.”³²² Responsive enforcement transformed section 10’s “previously obscure and rarely used permit provision” into “the centerpiece of . . . endangered species and ecosystem conservation policy.”³²³ Within the law of regulated industries, TELRIC likewise represents the “opening gambit[] in a prolonged bargaining process.”³²⁴ A harsh “penalty default” can force recalcitrant parties to divulge information that regulators desperately need.³²⁵ It is equally plausible to characterize the “deregulatory takings” argument as a default rule in its own right, but one that presumptively favors “compensation” for legal transitions that upsets “the preferences of a majority of the firms that contract with the government.”³²⁶

³¹⁸ See William J. Baumol & Thomas W. Merrill, *Deregulatory Takings, Breach of the Regulatory Contract, and the Telecommunications Act of 1996*, 72 N.Y.U. L. REV. 1037, 1047 (1997); George L. Priest, *The Origins of Utility Regulation and the “Theories of Regulation” Debate*, 36 J.L. & ECON. 289, 303 (1993).

³¹⁹ For sources comparing environmental and utility regulation, see Bernard S. Black & Richard J. Pierce, Jr., *The Choice Between Markets and Central Planning in Regulating the U.S. Electricity Industry*, 93 COLUM. L. REV. 1339, 1354–89 (1993); Sidney A. Shapiro & Joseph P. Tomain, *Rethinking Reform of Electricity Markets*, 40 WAKE FOREST L. REV. 497, 517–28 (2005).

³²⁰ 16 U.S.C. § 1538(a)(1) (2000).

³²¹ See *id.* § 1539(a).

³²² See *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 691 (1995).

³²³ Bradley C. Karkkainen, *Adaptive Ecosystem Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism*, 87 MINN. L. REV. 943, 970 (2003).

³²⁴ Daniel A. Farber, *Taking Slippage Seriously*, 23 HARV. ENVTL. L. REV. 297, 317 (1999); see also David A. Dana, *The New “Contractarian” Paradigm in Environmental Regulation*, 2000 U. ILL. L. REV. 35 (2000).

³²⁵ See, e.g., Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 94 (1989); Randy E. Barnett, *The Sound of Silence: Default Rules and Contractual Consent*, 78 VA. L. REV. 821, 887 (1992); Stephen J. Ware, *Default Rules from Mandatory Rules: Privatizing Law Through Arbitration*, 83 MINN. L. REV. 703, 706 (1999).

³²⁶ ROSSI, *supra* note 68, at 97; see also *id.* at 99.

This recharacterization of the ECPR, however, merely recasts the struggle over TELRIC as the very sort of substantive regulatory dispute that courts are unfit to settle.

To the extent that the effort to constitutionalize the ECPR represents an attempt to foreclose reasoned argument over stranded costs, litigation offers a highly inappropriate solution to this politically contentious debate. Stranded costs have resulted from "a shift in utility rate philosophy from a rate design based on 'cost plus rate of return' to a market-driven rate."³²⁷ "Of course, the term 'stranded costs' is something of a misnomer, for someone always pays for them."³²⁸ The very use of the word "stranded" implies that the costs at issue "are 'shipwrecked'" and that utility shareholders "are the innocent victims of [official] misadventure."³²⁹ Incumbent utilities justifiably fear that regulatory reform typically "means that the stranded cost bell will toll for some of them. Naturally, they think that is a bad idea."³³⁰ Just as naturally, however, if *consumers* were sufficiently informed and organized to resist the iron quadrangle of self-serving industries, craven legislators, captured bureaucrats, and awestruck judges,³³¹ they too might object just as vociferously to defraying incumbent utilities' stranded costs.

Forcing consumers to bear stranded costs is "the antithesis of competition."³³² Any incentives fostering prudent investment disappeared long ago. Opposition to stranded cost recovery expresses the Realist instinct that full compensation of incumbents, especially under conditions of rapid technological change, is not needed "to guarantee efficient long-term investment in utility infrastructure."³³³ Whether achieved by litigation or by

³²⁷ Ass'n of Pub. Agency Customers, Inc. v. Bonneville Power Admin., 126 F.3d 1158, 1180 (9th Cir. 1997).

³²⁸ *Id.*

³²⁹ ROSSI, *supra* note 68, at 101.

³³⁰ *Bonneville*, 126 F.3d at 1180.

³³¹ See generally, e.g., Gary S. Becker, *A Theory of Competition Among Pressure Groups for Political Influence*, 98 Q. J. ECON. 371 (1983); Steven P. Croley, *Theories of Regulation: Incorporating the Administrative Process*, 98 COLUM. L. REV. 1 (1998); Jonathan R. Macey, *Public Choice: The Theory of the Firm and the Theory of Market Exchange*, 74 CORNELL L. REV. 43 (1988); Sam Peltzman, *Toward a More General Theory of Regulation*, 19 J.L. & ECON. 211 (1976); Richard A. Posner, *Taxation by Regulation*, 2 BELL J. ECON. 22 (1971); George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. 3 (1971).

³³² *Cajun Elec. Power Coop., Inc. v. FERC*, 28 F.3d 173, 179 (D.C. Cir. 1994).

³³³ *Claeys*, *supra* note 25, at 209. See generally Eric R. Claeys, *Takings and Private Property on the Rehnquist Court*, 99 NW. U. L. REV. 187, 191-93, 216-19 (2004).

lobbying, stranded cost recovery effects a naked wealth transfer, and a backward-oriented one at that. Worst of all, the political economy of regulation enables incumbents to seize any failure, such as the California electricity crisis of 2000-01,³³⁴ as a rhetorical bludgeon against reform.³³⁵ As the technological, legal, and political suppositions accompanying original investments in legacy infrastructure fade further into the past, the anachronistic obsession with costs sunk long ago becomes the dead hand of the law of regulated industries.

Finally, at the risk of indulging in the “trivial ritual”³³⁶ of invoking “[n]ew technology [as] the easy answer to everything,”³³⁷ I shall invoke the broader “policy of the United States to encourage the provision of new technologies and services to the public.”³³⁸ Though the notion sounds hackneyed, the FCC does have a mandate “to promote . . . policies and purposes . . . favoring diversity of media voices, vigorous economic competition, [and] technological advancement.”³³⁹ The Telecommunications Act was intended not only to “secure lower prices and higher quality services” but also to “encourage the rapid deployment of new telecommunications technologies.”³⁴⁰ TELRIC’s reliance on hypothetical networks not yet invented, let alone deployed, vests faith in deregulation’s ability to force technological change. Corrosive assaults on incumbency often lead to a remarkable “flowering of innovation.”³⁴¹

(tracing the theoretical underpinnings of contemporary takings doctrine to Legal Realism).

³³⁴ See generally Ashutosh Bhagwat, *Institutions and Long Term Planning: Lessons from the California Electricity Crisis*, 55 ADMIN. L. REV. 95 (2003); Timothy P. Duane, *Regulation’s Rationale: Learning from the California Energy Crisis*, 19 YALE J. ON REG. 471 (2002); Paul L. Joskow, *California’s Electricity Crisis*, 17 OXFORD REV. ECON. POL’Y 365, 374 (2001); Jim Rossi, *The Electric Deregulation Fiasco: Looking to Regulatory Federalism to Promote a Balance Between Markets and the Provision of Public Goods*, 100 MICH. L. REV. 1768 (2002).

³³⁵ See Richard J. Pierce, Jr., *Completing the Process of Restructuring the Electricity Market*, 40 WAKE FOREST L. REV. 451, 479 (2005).

³³⁶ Thomas G. Krattenmaker & L.A. Powe, Jr., *Converging First Amendment Principles for Converging Communications Media*, 104 YALE L.J. 1719, 1719 (1995).

³³⁷ Thomas W. Hazlett, *Predation in Local Cable TV Markets*, 40 ANTITRUST BULL. 609, 643 (1995).

³³⁸ 47 U.S.C. § 157(a) (2000); accord, e.g., Time Warner Entertainment Co., 8 F.C.C.R. 7106, 7107–08 (1993).

³³⁹ 47 U.S.C. § 257(b) (2000).

³⁴⁰ Act of Feb. 8, 1996, Pub. L. No. 104-104, 110 Stat. 56, 56 (preamble) (1996).

³⁴¹ *United States v. W. Elec. Co.*, 890 F. Supp. 1, 9 (D.D.C. 1995), *vacated as moot*, 84 F.3d 1452 (D.C. Cir. 1996).

To the extent that deregulation is intended to restructure an industry whose monopolistic structure is vulnerable to improved technology, the ECPR is a singularly inappropriate regime. The ECPR's definition of "market-based" pricing erroneously assumes that transactions in telecommunications occurred under something resembling competitive conditions.³⁴² TELRIC does consciously funnel subsidies toward entrants at the expense of incumbent carriers. Incensed by TELRIC and other efforts to spur competitive entry, incumbent carriers routinely decry the extension of subsidies to their competitors as "artificial competition."³⁴³ The trouble with condemning procompetitive subsidies as "artificial," however, is that incumbent telephone companies are themselves beneficiaries of regulatory subsidies. Incumbent carriers cannot claim "natural" status when *all* competitors are necessarily "artificial." In any market where the incumbent has historically depended on public largesse, the decision to subsidize a competitor is no more "artificial" than the incumbent's dominance is "natural."

Given wireline telephony's historic dependence on direct and intangible subsidies, it is downright unseemly for incumbents to argue that they should "get all that the Government gives and do nothing that the Government asks."³⁴⁴ A refusal to credit this sort of self-dealing carries no constitutional consequences. "It is hardly lack of due process for the Government to regulate that which it subsidizes."³⁴⁵ Further attacks on TELRIC in particular and the mandatory access strategy in general should be countered by an explicit accounting of the many ways in which the government has affirmatively subsidized incumbent carriers.³⁴⁶

In the end, we can leave the relative merits of these pricing rules for another day. What matters for the moment is the constitutional status of the so-called "regulatory compact." References to such a "compact" and to its breach as a "deregulatory taking[]" exploit "the rhetoric of legal entitlement," the superficially lawful basis by which owners of legacy infrastructure may "invoke the Contracts Clause and the Takings Clause of the United States Constitution as a basis for enforcing purported regulatory

³⁴² Cf. OZ SHY, *THE ECONOMICS OF NETWORK INDUSTRIES* 5–6 (2001) (asserting that network industries "cannot function as competitive markets").

³⁴³ See Jim Chen, *Subsidized Rural Telephony and the Public Interest*, 2 J. ON TELECOMM. & HIGH TECH. L. 307, 345 & n.236 (2003) (citing sources).

³⁴⁴ Wickard v. Filburn, 317 U.S. 111, 133 (1942).

³⁴⁵ *Id.* at 131.

³⁴⁶ See generally Gideon Parchomovsky & Abraham Bell, *Givings*, 111 YALE L.J. 547 (2001).

commitments.”³⁴⁷ But no such legal basis exists. “To date, not a single court has accepted the deregulatory taking[s] argument”³⁴⁸ The law simply does not support any effort to transform the ECPR into a constitutional floor on prices received by legacy networks subject to mandatory access.

“Geology knows no such word as forever.”³⁴⁹ Neither does law. The day may come when regulators will insist that prices for network elements sold under legal compulsion should include the opportunity cost of business foreclosed by regulatory change. Given the “dynamic choice of uses . . . in light of rapid technological change,” rapid turnover in substantive regulatory policies and the procedural framework for crafting those policies may be salutary.³⁵⁰ The fact remains, however, that the FCC has rejected a pro-incumbent alternative to TELRIC, and the Supreme Court has exhibited no inclination to adopt the ECPR as a constitutional imperative. Forlorn, the backward-looking advocates of the “deregulatory takings” model sing of “old, unhappy, far-off things, / And battles long ago.”³⁵¹ The legal endorsement of TELRIC’s forward-looking methodology as a matter of regulatory prerogative effectively directs incumbents to bear all “natural sorrow, loss, or pain, / That has been, and may be again.”³⁵²

III. THE ART OF THE COVENANT: RECONSIDERING AND REJECTING THE REGULATORY COMPACT

The futile effort to constitutionalize any ratemaking rule, let alone a backward-looking methodology that repudiates decades of regulatory wisdom, runs into the teeth of Supreme Court doctrine. “It is not theory but the impact of the rate order which counts,” said *Hope Natural Gas*.³⁵³ “If the total effect of the rate order cannot be said to be unreasonable, judicial inquiry . . . is at an end.”³⁵⁴ As the reign of *Smyth v. Ames* neared its end, the

³⁴⁷ ROSSI, *supra* note 68, at 103. See generally D. N. MCCLOSKEY, THE RHETORIC OF ECONOMICS 54–86 (1985) (describing how economics is more of a persuasive art than a quantitative discipline).

³⁴⁸ ROSSI, *supra* note 68, at 124.

³⁴⁹ WALLACE STEGNER, MORMON COUNTRY 48 (U. Neb. Press 1970) (1942).

³⁵⁰ Henry E. Smith, *Governing the Tele-Semicommons*, 22 YALE J. ON REG. 289, 301 (2005).

³⁵¹ WILLIAM WORDSWORTH, *The Solitary Reaper*, in THE COMPLETE POETICAL WORKS OF WILLIAM WORDSWORTH 192 (London, Macmillan 1905); accord *Kaiser Aetna v. United States*, 444 U.S. 164, 177 (1979).

³⁵² WORDSWORTH, *supra* note 351, at 192.

³⁵³ Fed. Power Comm’n v. *Hope Natural Gas Co.*, 320 U.S. 591, 602 (1944).

³⁵⁴ *Id.*

Supreme Court, “mindful of its distinctive function in the enforcement of constitutional rights, . . . refused to be bound by any artificial rule or formula which changed conditions might upset.”³⁵⁵ *Hope Natural Gas* wove this deferential attitude into the fabric of American constitutional law. Even under the most aggressive application of *Smyth*’s judicial approach, the sole question before a court is whether ratemaking “has passed beyond the lowest limit of the permitted zone of reasonableness into the forbidden reaches of confiscation.”³⁵⁶ Such “judicial scrutiny” as is constitutionally warranted must “take into account the entire legislative process, including the reasoning and findings upon which the legislative action rests.”³⁵⁷

Ratemaking is precisely the sort of subtle and complex enterprise that defies judicial review. Under the decisional sequence connecting *Hope Natural Gas* to *Verizon*, judicial constraints on ratemaking generally yield in favor of rules supplied by superior institutions. Courts should not reverse administrative lawmaking concerning issues as “technical, complex, and dynamic” as the regulation of network infrastructure.³⁵⁸ Unless a legislature prescribes a binding methodology,³⁵⁹ discretion over ratemaking belongs to the duly authorized agency.³⁶⁰ The “advocates of [the] deregulatory takings” movement characterize the role of the courts as that of “enforcers of rights and contractual bargains.”³⁶¹ The metaphorical “[u]nderstanding [of] regulation as a bargain, however, does not commit or limit courts to the role of discovering and enforcing implicit contracts.”³⁶² Indeed, the task of “sustain[ing] preexisting bargains between firms and the government” inherently contradicts “the longstanding tradition of judicial deference to regulatory bodies.”³⁶³

³⁵⁵ *L.A. Gas & Elec. Corp. v. R.R. Comm’n*, 289 U.S. 287, 305 (1933); *accord Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 524–25 (2002).

³⁵⁶ *St. Joseph Stock Yards Co. v. United States*, 298 U.S. 38, 53 (1936).

³⁵⁷ *Id.*; *see also id.* at 50 (“The fixing of rates is a legislative act.”).

³⁵⁸ *National Cable & Telecomms. Ass’n, Inc. v. Gulf Power Co.*, 534 U.S. 327, 339 (2002); *accord National Cable & Telecomms. Ass’n, Inc. v. Brand X Internet Servs.*, 125 S. Ct. 2688, 2712 (2005).

³⁵⁹ *See Greeting Card Publishers v. U.S. Postal Serv.*, 462 U.S. 810, 826 (1983); *Colo. Interstate Gas Co. v. Fed. Power Comm’n*, 324 U.S. 581, 589 (1945).

³⁶⁰ *See Greeting Card Publishers*, 462 U.S. at 825–26; *Am. Commercial Lines, Inc. v. Louisville & Nashville R.R. Co.*, 392 U.S. 571, 590–93 (1968); *Colo. Interstate*, 324 U.S. at 589.

³⁶¹ Jim Rossi, *Moving Public Law Out of the Deference Trap in Regulated Industries*, 40 WAKE FOREST L. REV. 617, 619 (2005).

³⁶² ROSSI, *supra* note 68, at 95.

³⁶³ Rossi, *supra* note 361, at 619.

The progressive preference for expert decisionmaking should be even more pronounced in the context of ratemaking.³⁶⁴ “Detailed judicial review of ratemaking,” far from effectively “constraining the political process,” actually “impose[s] high error costs and high judicial resource costs.”³⁶⁵ Constitutionalizing *any* ratemaking rule, from TELRIC to the ECPR, would “make a fetish of mere accounting” and “shield from examination the deeper causes, forces, movements, and conditions which should govern rates.”³⁶⁶ Humans understandably crave certainty and order, especially causally coherent stories that ascribe bad outcomes to prior misconduct.³⁶⁷ But this yearning for predictability, especially if synthesized by force of law, carries a deep price. As Justice Jackson recognized in his *Hope Natural Gas* dissent, “our quest for certitude is so ardent that we pay an irrational reverence to a technique which uses symbols of certainty, even though experience again and again warns us that they are delusive.”³⁶⁸

There is an antidote to acontextual theorizing run amok. In the law of regulated industries, as in any other field, “pedestrian ‘normal science,’” pursued persistently enough, will eventually eclipse “brilliant, ‘paradigm shifting’” misadventures.³⁶⁹ Faithful to takings doctrine’s preference for the “exercise of [nuanced] judgment” over “abstract” efforts at “the application of logic,”³⁷⁰ this Article now undertakes the project of thoroughly sifting the “stubborn facts” that comprise the law of regulated industries.³⁷¹

A pragmatic and detail-oriented look at regulation yields two conclusions as simple as they are sobering. First, the “regulatory compact” is a misleading metaphor whose time has passed. At one time a descriptively accurate and perhaps prescriptively desirable framework by which the

³⁶⁴ See generally Eric R. Claeys, *Progressive Political Theory and Separation of Powers on the Burger and Rehnquist Courts*, 21 CONST. COMMENT. 405 (2004).

³⁶⁵ Richard J. Pierce, Jr., *Public Utility Regulatory Takings: Should the Judiciary Attempt to Police the Political Institutions?*, 77 GEO. L.J. 2031, 2046 (1989).

³⁶⁶ Fed. Power Comm’n v. *Hope Natural Gas Co.*, 320 U.S. 591, 643 n.40 (1944) (Jackson, J., dissenting).

³⁶⁷ See Michael J. Lerner & Dale T. Miller, *Just World Research and the Attribution Process: Looking Back and Looking Ahead*, 85 PSYCH. BULL. 1030 (1978).

³⁶⁸ *Hope Natural Gas*, 320 U.S. at 643 n.40 (Jackson, J., dissenting).

³⁶⁹ Daniel A. Farber, *The Case Against Brilliance*, 70 MINN. L. REV. 917, 929 (1986); see also KUHN, *supra* note 43, at 10 (defining “normal science” as “research firmly based upon one or more past scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice”).

³⁷⁰ *Andrus v. Allard*, 444 U.S. 51, 65 (1979).

³⁷¹ *Colo. Interstate Gas Co. v. Fed. Power Comm’n*, 324 U.S. 581, 605 (1945).

government calibrated its relationship with private providers of infrastructure, the notion of a regulatory compact has outlived its usefulness. Indeed, it is an affirmative drag on legal understanding. It deserves to be discarded altogether. Second, the progressive tradition in the law of regulated industries has persisted and should be paramount. Complex and rapidly evolving networks such as those that deliver electricity and telecommunications demand technical expertise and administrative flexibility beyond judicial competence.

A. The Rise and Fall of the Public Franchise

Privately owned infrastructure firms do stand in a special relationship with regulators. At times, traditional public utility law has seen fit to characterize this relationship as some sort of regulatory "contract" or "compact." No other metaphor more aptly describe the project of Professors Sidak, Spulber, and Yoo to constitutionalize ratemaking, as though strict adherence to the ECPR were one of the conditions under which operators of legacy transportation, energy, and communications networks submitted to regulation of their rates and their relationships with customers and competitors. True understanding of the "regulatory compact," however, cannot come through grand constitutional theory. The key to the relationship between utility shareholders and expert regulators lies exclusively in a contextual examination of concrete regulatory policies.

Defining public utility law according to a single contractual metaphor is historically inaccurate and jurisprudentially misleading. American governments, particularly at the state and local levels, have always enjoyed the alternative of directly contracting with private providers of infrastructure. Indeed, given the traditional American disdain for public enterprise, the contracting option was historically the first resort, not the last, for financing infrastructure commonly designated today as "public utilities." This is the true sense in which the "regulatory compact" might have been—and at one time *was*—a legally enforceable contract.

But direct contracting between private providers of infrastructure and the government has never taken hold in the United States for the most complex forms of network infrastructure, especially electricity and telecommunications. These industries hold the greatest potential for rapid technological evolution and intermodal competition. In place of public enterprise and direct contracting, American governments, at every level, have historically adopted some variation on the theme of discretionary regulation by a duly authorized, specially trained agency.

Admittedly, one of the historically dominant approaches to public utility regulation did adopt the "regulatory compact" as a metaphor guiding judicial

decisionmaking. This understanding of the “regulatory compact” was akin to a substantive canon of construction guiding the interpretation of regulatory statutes as vague as their subjects were sprawling and complex.³⁷² The regulatory compact’s failure as law and as policy, however, warrants a contrary approach. In place of the outdated and socially destructive “regulatory compact,” the law of regulated industries should embrace forward-looking, competitively neutral, and administratively workable principles of aggressive reform.

Direct governmental ownership of infrastructure is certainly a plausible exercise of the states’ police powers. In some ways it is even legally privileged. Generally speaking, states and their subdivisions may operate businesses, even in an overtly biased fashion favoring their own citizens, without fear of constitutional prohibitions on discriminatory taxation or regulation.³⁷³ The Supreme Court grants no such latitude, however, when state and local governments grant one private party exclusivity over a geographic market, even when this expedient provides the most politically viable “financing measure” for infrastructure.³⁷⁴ Direct franchising with private providers thus exposes state and local governments to some risk of the constitutional condemnation that awaits all other measures that “hoard a local resource . . . for the benefit of local businesses.”³⁷⁵ This distinction reflects a sound understanding of public choice theory.³⁷⁶ Because any

³⁷² See generally William N. Eskridge, Jr. & Philip P. Frickey, *Quasi-Constitutional Law: Clear Statement Rules as Constitutional Lawmaking*, 45 VAND. L. REV. 593 (1992); William N. Eskridge, Jr. & Philip P. Frickey, *The Supreme Court, 1993 Term—Foreword: Law as Equilibrium*, 108 HARV. L. REV. 26 (1994).

³⁷³ See *Reeves, Inc. v. Stake*, 447 U.S. 429 (1980); *Hughes v. Alexandria Scrap Corp.*, 426 U.S. 794, 807–09 (1976). Compare, e.g., *New Energy Co. v. Limbach*, 486 U.S. 269, 278 (1988) (stating that “[d]irect subsidization of domestic industry does not ordinarily run afoul” of the dormant commerce clause) with, e.g., *City of Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978) (establishing a “virtually *per se* rule of invalidity” for facially discriminatory regulatory legislation). See generally Jim Chen, *The Vertical Dimension of Cooperative Competition Policy*, 48 ANTITRUST BULL. 1005 (2003); Jim Chen, *A Vision Softly Creeping: Congressional Acquiescence and the Dormant Commerce Clause*, 88 MINN. L. REV. 1764 (2004).

³⁷⁴ *C&A Carbone, Inc. v. Town of Clarkstown*, 511 U.S. 383, 393 (1994); cf. Susan P. Schoettle & David G. Richardson, *Nontraditional Uses of the Utility Concept to Fund Public Facilities*, 25 URB. LAW. 519, 523–24 (1993) (describing exclusive franchising coupled with ratemaking as an alternative to less politically viable means of public finance).

³⁷⁵ *Carbone*, 511 U.S. at 392.

³⁷⁶ See generally Maxwell L. Stearns, *A Beautiful Mend: A Game Theoretical Analysis of the Dormant Commerce Clause Doctrine*, 45 WM. & MARY L. REV. 1 (2003).

deployment of a state's own limited funds is transparent and can be countered through ordinary politics, courts are more willing to tolerate discrimination through subsidy or direct market participation than discrimination via coercive taxation or regulation.³⁷⁷

The Supreme Court readily imputes unlawful purposes to an arrangement that straddles the line between permissible public enterprise and unconstitutionally discriminatory franchising: "There are sound reasons for distinguishing between a State's preferring its own residents in the initial disposition of goods when it is a market participant and a State's attachment of restrictions on dispositions subsequent to the goods coming to rest in private hands."³⁷⁸ Those downstream conditions enjoy no constitutional immunity. This admittedly obscure application of the dormant commerce clause is consistent with this area's overarching structure: state and local governments enjoy significantly more room to experiment with outright public ownership than with franchising.

Yet public enterprise has never taken deep root in America. Except with respect to roads, highways, municipal transit, airports, the postal network, and water management facilities (whether for irrigation, hydropower generation, or municipal distribution); the United States has traditionally eschewed direct public ownership of infrastructure.³⁷⁹ Within a culture whose citizens disdain socialism with "remarkable" intensity and are "energetic and articulate defenders" of capitalism,³⁸⁰ public ownership represents a significant deviation from the norm of private enterprise.³⁸¹

³⁷⁷ See Dan T. Coenen, *Untangling the Market-Participant Exemption to the Dormant Commerce Clause*, 88 MICH. L. REV. 395, 479 (1989); Walter Hellerstein & Dan T. Coenen, *Commerce Clause Restraints on State Business Development Incentives*, 81 CORNELL L. REV. 789, 840 (1996); Richard B. Collins, *Economic Union as a Constitutional Value*, 63 N.Y.U. L. REV. 43, 103 (1988); Mark P. Gergen, *The Selfish State and the Market*, 66 TEX. L. REV. 1097, 1138 (1988); Michael Wells & Walter Hellerstein, *The Governmental-Proprietary Distinction in Constitutional Law*, 66 VA. L. REV. 1073, 1129, 1131-33 (1980).

³⁷⁸ *South-Central Timber Dev. v. Wunnicke*, 467 U.S. 82, 98 (1984) (plurality opinion).

³⁷⁹ See, e.g., STEPHEN BREYER, *REGULATION AND ITS REFORM* 181-83 (1982).

³⁸⁰ JOHN KENNETH GALBRAITH, *ECONOMICS AND THE ART OF CONTROVERSY* 35 (1955).

³⁸¹ See, e.g., E.J. Mishan, *Criteria for Public Investment: Some Simplifying Suggestions*, 75 J. POL. ECON. 139 (1967); John E. Osborn, *New York's Urban Development Corporation: A Study on the Unchecked Power of a Public Authority*, 43 BROOK. L. REV. 237, 238 (1977); William J. Quirk & Leon E. Wein, *A Short Constitutional History of Entities Commonly Known as Authorities*, 56 CORNELL L. REV. 521 (1971).

Aside from public agencies such as the Bonneville Power Administration³⁸² and the Tennessee Valley Authority,³⁸³ most facilities for the generation, transmission, or distribution of electricity in the United States remain in private hands. By contrast, economic regulation short of expropriation is pervasive. On a broader historic and geographic scale, both of these tendencies are anomalies. Non-American jurisdictions are much more likely to treat the deployment of infrastructure as a job for the government. *Rien de grand ne se fait sans l'État*.³⁸⁴

The contemporary law of regulated industries, however, did not spring, Athena-like, directly from the legislative imagination of the late nineteenth century. At that time, municipal franchising of private firms represented the dominant means of supplying water and gas.³⁸⁵ The decline of these so-called "concession contracts" coincided with the emergence of urban streetcar and electricity networks.³⁸⁶ By the eve of World War I, most franchises had yielded either to outright municipal ownership or to regulation by newly established public utility commissions.³⁸⁷ Like the brief period during which competing carriers enabled nearly half of American cities to choose among multiple telephone carriers,³⁸⁸ concession contracting before the Great War offered fleeting hope that infrastructure required neither monopolistic dominance nor intensive regulation.

The franchising movement collapsed amid charges that "cities were too incompetent or corrupt to regulate,"³⁸⁹ notwithstanding its advocates' belief that municipal franchising has performed at least as well as utility regulation in limiting rates and improving service.³⁹⁰ "[M]any if not most state and local utility regulators shifted from a franchise model to ongoing and ad hoc rate of return regulation during the twentieth century."³⁹¹ The economics of

³⁸² See 16 U.S.C. §§ 832–832m (2000).

³⁸³ See *id.* §§ 831–831ee.

³⁸⁴ Charles Pasqua, *L'heure de vérité*, ANTENNE 2 (Feb. 1990) ("Nothing big gets done without the government.").

³⁸⁵ See GÓMEZ-IBÁÑEZ, *supra* note 2, at 157–66.

³⁸⁶ See *id.* at 166–76.

³⁸⁷ See *id.* at 176–78.

³⁸⁸ See Warren G. Lavey, *The Public Policies That Changed the Telephone Industry into Regulated Monopolies: Lessons from Around 1915*, 39 FED. COMM. L.J. 171, 178 (1987); Howard A. Shelanski, *From Sector-Specific Regulation to Antitrust Law for US Telecommunications: The Prospects for Transition*, 26 TELECOM. POL'Y 335, 343–44 (2002).

³⁸⁹ GÓMEZ-IBÁÑEZ, *supra* note 2, at 174.

³⁹⁰ See *id.* at 182–83.

³⁹¹ Claeys, *supra* note 25, at 236. See generally CHARLES H. KENNEDY, AN

the firm dictated this trend. As if to rebuke judicial pronouncements that governments "simply are different from private parties and have a different role to play" in a regulatory system,³⁹² increasingly sophisticated connections are emerging between the economics of the firm and economic constraints on public governance.³⁹³ Most conventional "descriptions of natural monopoly stress the importance of large economies of scale and underplay the role of durable and immobile investments in establishing the barrier to entry."³⁹⁴ To be sure, the construction of infrastructure does often yield some sort of monopoly, either because the type of infrastructure at issue truly does lend itself to "natural monopoly" or because monopoly persists by inertia from earlier decisions to regulate entry, exit, rates, and terms of service.³⁹⁵ But economies of scale, economies of scope, and network efficiencies "are arguably less important than durable and immobile investments in establishing the barrier to entry in natural monopoly."³⁹⁶ At an extreme, the presence of "durable and immobile investments, not economies of scale, [is arguably] the defining characteristic of infrastructure monopolies."³⁹⁷

The law of regulated industries thus represents nothing less than an extension of the mission that Ronald Coase outlined in *The Nature of the Firm*—the task of rendering "[t]he whole of the 'structure of competitive industry' . . . tractable by the ordinary technique of economic analysis."³⁹⁸ Within regulatory policy, *The Nature of the Firm* has much greater impact

INTRODUCTION TO U.S. TELECOMMUNICATIONS LAW 5–17 (1994); Priest, *supra* note 318, at 301–23.

³⁹² Wis. Dep't of Indus., Labor & Human Relations v. Gould, 475 U.S. 282, 290 (1986).

³⁹³ See generally Oliver E. Williamson, *The New Institutional Economics: Taking Stock, Looking Ahead*, 38 J. ECON. LITERATURE 595 (2000); Richard O. Zerbe, Jr. & Howard McCurdy, *The End of Market Failure*, 23:2 REGULATION 10 (2001); Richard O. Zerbe, Jr. & Howard E. McCurdy, *The Failure of Market Failure*, 18 J. POL'Y ANALYSIS & MGMT. 558 (1999). "[T]he whole federalist institutional structure of the state might [have been] formed to minimize the transaction costs of making collective decisions." DENNIS MUELLER, PUBLIC CHOICE II 73 & n.13 (1989); cf. Gordon Tullock, *Federalism: Problems of Scale*, 6 PUB. CHOICE 19 (1969).

³⁹⁴ GÓMEZ-IBÁÑEZ, *supra* note 2, at 8; see also Richard Schmalensee, *A Note on Economies of Scale and Natural Monopoly in the Distribution of Public Utility Services*, 9 BELL J. ECON. 270 (1978).

³⁹⁵ See generally Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 611–16 (1969).

³⁹⁶ GÓMEZ-IBÁÑEZ, *supra* note 2, at 9.

³⁹⁷ *Id.* (emphasis in original).

³⁹⁸ R.H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386, 398 (1937).

than *The Problem of Social Cost*.³⁹⁹ Notwithstanding the theory of “deregulatory takings” as propounded by Professors Sidak, Spulber, and Yoo, the Coase Theorem’s strong emphasis on property rights⁴⁰⁰ has little bearing on regulated industries. “[A]mbiguous property rights are not a major source of high transaction costs” affecting the “case for government intervention in infrastructure monopolies.”⁴⁰¹

By contrast, *The Nature of the Firm* revealed that vertical integration within one firm and open-market purchases reflect the same economic calculus. Any entrepreneur must decide whether to secure “factors of production at a lower price than the market transactions” superseded by vertical integration, or else “to revert to the open market” to acquire those same factors of production from other suppliers.⁴⁰² In other words, “market transactions” occur—at the expense of efforts to integrate “all production” into “one big firm”—because intrafirm management cannot invariably “reduce the cost of production,” let alone wholly “eliminate certain [categories of] costs.”⁴⁰³ *The Nature of the Firm*’s most important conclusion—that firms arise to minimize transaction costs in production⁴⁰⁴—governs any organizational undertaking, whether for profit or for political power.

A Coasean analysis suggests that the most substantial problems in the regulation of infrastructure involve asset-specificity and the difficulty of facilitating interoperability without sacrificing competition. Workable solutions must overcome daunting barriers such as the impossibility of anticipating all legal or technological changes and the intractability of coordinating the use of any single transportation or communications platform. Just as *The Problem of Social Cost* informed Guido Calabresi and

³⁹⁹ R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960). Legal writers’ preference for *The Problem of Social Cost* over *The Nature of the Firm*, the true source of transaction cost analysis, is nevertheless striking. Only two federal courts have ever cited *The Nature of the Firm*. See *Herzog Contracting Corp. v. McGowen Corp.*, 976 F.2d 1062, 1067 (7th Cir. 1992); *Clajon Gas Co. v. Commissioner*, 119 T.C. 197, 215–16 (2002) (Beghe, J., dissenting). By contrast, dozens of courts have cited *The Problem of Social Cost*. See, e.g., *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 864 n.3 (1975) (Brennan, J., dissenting); *Ruggiero v. FCC*, 317 F.3d 239, 245 (D.C. Cir. 2003); *Tavernor v. Ill. Fed’n of Teachers*, 226 F.3d 842, 849 (7th Cir. 2000).

⁴⁰⁰ See Daniel A. Farber, *Parody Lost/Pragmatism Regained: The Ironic History of the Coase Theorem*, 83 VA. L. REV. 397, 397 (1997) (tracing the derivation of the Coase Theorem from *The Problem of Social Cost*).

⁴⁰¹ GÓMEZ-IBÁÑEZ, *supra* note 2, at 22.

⁴⁰² Coase, *supra* note 398, at 392.

⁴⁰³ *Id.* at 394.

⁴⁰⁴ See *id.* at 392.

Douglas Melamed's choice between property rules and liability rules,⁴⁰⁵ *The Nature of the Firm* informs the choice between utility regulation and contractual alternatives. Negotiation is never free of cost, and the inability of parties to foresee all contingencies means that contracts are unavoidably incomplete.⁴⁰⁶ Whether government elects to build infrastructure on its own, to contract with private firms for infrastructure, or to retain long-term oversight over a shareholder-owned utility depends on contractual cost and contractual incompleteness. Each of these factors, along with the towering significance of information in the modern economy, favors a high degree of vertical integration to the extent that a single firm can outperform uncoordinated actors in internalizing and reducing the costs of contracting.⁴⁰⁷

Asset-specificity is formally defined as the relative difficulty of transferring assets intended for use in one transaction to other uses.⁴⁰⁸ Whether limited by geography, time, or human capital, highly specific assets are sunk costs whose value is constrained beyond a specific transaction. Holders of highly specific assets need strong contractual reassurances to combat opportunism by nimbler rivals or business partners. No matter which party bears its brunt, the problem of asset-specificity is "an inevitable consequence of . . . technology" and of physical constraints on large, immobile, and durable investments.⁴⁰⁹ Moreover, the very presence of specialization, so essential to the construction and operation of large-scale infrastructure, exacerbates asset-specificity and magnifies the potential for

⁴⁰⁵ See Guido Calabresi & Douglas A. Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972); cf. James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440, 440 (1995).

⁴⁰⁶ See Oliver Hart & John Moore, *Incomplete Contracts and Renegotiation*, 56 ECONOMETRICA 755, 755 (1988); Oliver D. Hart, *Incomplete Contracts and the Theory of the Firm*, in *THE NATURE OF THE FIRM: ORIGINS, EVOLUTION, AND DEVELOPMENT* 138, 140-42 (Oliver E. Williamson & Sidney G. Winter eds., 1991).

⁴⁰⁷ See generally MARK CASSON, *INFORMATION AND ORGANIZATION: A NEW PERSPECTIVE ON THE THEORY OF THE FIRM* (1997).

⁴⁰⁸ See generally, e.g., OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING* (1996); Paul L. Joskow, *Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence*, 4 J.L. ECON. & ORG. 95 (1988); Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519 (1983); Oliver E. Williamson, *The Economics of Organization: The Transaction Cost Approach*, 87 AM. J. SOCIOL. 548 (1981).

⁴⁰⁹ GÓMEZ-IBÁÑEZ, *supra* note 2, at 10.

opportunistic behavior.⁴¹⁰

Opportunistic exploitation of a party who has committed asset-specific resources poses a serious threat in any contractual setting.⁴¹¹ Most accounts of regulatory failure emphasize private vulnerability to governmental treachery—the prospect “that the government will renege on commitments to private infrastructure rather than vice versa.”⁴¹² This is almost certainly the threat of opportunistic breach that animates Professors Sidak, Spulber, and Yoo’s appeal to a mythical “regulatory compact.” The libertarian tradition in property law counsels that regulatory policy in general and takings doctrine in particular should err in favor of compensating incumbents and “encouraging long-term investment,” insofar as “telecommunications [and] other utilities” are prone to the “strong danger that regulators may discourage long-term utility investment by using the power to regulate to expropriate capital.”⁴¹³

The libertarian narrative, however, neglects the prospect that private firms can themselves behave opportunistically. “[G]overnment and consumer vulnerability to opportunism” by privately owned utilities is at least as plausible as expropriation.⁴¹⁴ As a state supreme court recognized in a recent ratemaking dispute, grave danger lies in regulatory rules that allow a utility to “earn[] a profit when things [go] well,” but “turn around and force ratepayers to reimburse” shareholders for “great losses” that the utility might incur.⁴¹⁵ Whatever else regulation should be, it cannot represent a game of “heads I win, tails you lose.” It also bears remembering that asset-specificity is unique to utility companies. By making their own durable, immobile investments based on privately supplied infrastructure, consumers can become “captive” in their own right. An incumbent firm’s market power is often potent enough to deter potential challengers. Whether achieved through contract, utility regulation, or public enterprise, the provision of infrastructure must anticipate all potential changes affecting the three-way

⁴¹⁰ See Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297, 298–300 (1978).

⁴¹¹ See, e.g., WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM*, *supra* note 408, at 76; Lloyd Cohen, *Holdouts and Free Riders*, 20 J. LEGAL STUD. 351, 352 (1991).

⁴¹² GÓMEZ-IBÁÑEZ, *supra* note 2, at 2.

⁴¹³ Claeys, *supra* note 25, at 208. See generally Eric R. Claeys, *Takings, Regulations, and Natural Property Rights*, 88 CORNELL L. REV. 1549, 1607–15 (2003) (outlining a libertarian theory of property).

⁴¹⁴ GÓMEZ-IBÁÑEZ, *supra* note 2, at 3.

⁴¹⁵ *PacifiCorp v. Pub. Serv. Comm’n*, 103 P.3d 862, 874 (Wyo. 2004) (describing recovery under such circumstances as “set[ting] a poor precedent”).

relationship between the firm, the market, and the regulatory state.⁴¹⁶

As was true during the heyday of the municipal franchise, a very tangible "regulatory compact" may bind government with private providers of infrastructure. Nearly forty years ago, Harold Demsetz asked outright, "Why regulate public utilities?"⁴¹⁷ A budding movement to revive the municipal franchise in place of public utility regulation has taken its inspiration from Demsetz and other experts who "were critical of the performance of U.S. regulatory agencies, and [who] saw a return to concession contracts as the answer."⁴¹⁸ So-called Demsetz competition posits that government can emulate competition even under monopolistic conditions "by competitively awarding a concession of limited duration to the bidder who offer[s] the lowest prices and best service."⁴¹⁹

Demsetz competition, however, has fallen far short of displacing more elaborate forms of regulation. "[E]ven carefully drawn contracts are unlikely to anticipate every contingency, especially if uncertainty is great or the duration of the contract is long."⁴²⁰ The increased "need for contractual complexity" simultaneously raises "the cost of bilateral contracting" and enhances the allure of "internal control."⁴²¹ Municipal franchising has not displaced the state and "federal regulatory agencies for most of the established regulated industries."⁴²² Most pointedly, "municipal officials are not trying to draft twenty- or thirty-year contracts for complex integrated utility systems," least of all for the "most complex utilities, such as electricity and telephones."⁴²³ These networks continue to be regulated on the public utility model.⁴²⁴ Electricity and telecommunications are the industries whose "breadth and complexity . . . demand" that regulators

⁴¹⁶ See generally RONALD COASE, *THE FIRM, THE MARKET, AND THE LAW* (1988).

⁴¹⁷ Harold Demsetz, *Why Regulate Utilities?*, 11 J.L. & ECON. 55 (1968).

⁴¹⁸ GÓMEZ-IBÁÑEZ, *supra* note 2, at 85; see also, e.g., Richard A. Posner, *The Appropriate Scope of Regulation in the Cable Television Industry*, 3 BELL J. ECON. 98, 126 (1972); Mark A. Zupan, *The Efficacy of Franchise Bidding Schemes in the Case of Cable Television: Some Systemic Evidence*, 32 J.L. & ECON. 401, 404-07 (1989).

⁴¹⁹ GÓMEZ-IBÁÑEZ, *supra* note 2, at 85.

⁴²⁰ *Id.* at 85-86; see also Victor P. Goldberg, *Regulation and Administered Contracts*, 7 BELL J. ECON. 426, 426 (1976); Oliver E. Williamson, *Franchise Bidding for Natural Monopolies—In General and with Respect to CATV*, 7 BELL J. ECON. 73, 75 (1976).

⁴²¹ ROSSI, *supra* note 68, at 38. See generally OLIVER E. WILLIAMSON, *THE MECHANISMS OF GOVERNANCE* (1996).

⁴²² GÓMEZ-IBÁÑEZ, *supra* note 2, at 86.

⁴²³ *Id.* at 187.

⁴²⁴ See *id.*

charged with patrolling them “be given every reasonable opportunity to formulate methods of regulation appropriate for the solution of . . . intensely practical difficulties.”⁴²⁵ The federal agencies duly empowered to regulate those markets enjoy expansive statutory mandates with “public interest” provisions that are as “supple” and “as concrete as the complicated factors for judgment in such a field of delegated authority permit.”⁴²⁶ FERC and the FCC have rarely hesitated to exploit their “wide discretion” to engage in “imaginative interpretation” of the Federal Power Act of 1935, the Natural Gas Act of 1938, and the Communications Act of 1934.⁴²⁷

Direct contracting fails—and ad hoc public utility regulation persists—because municipal franchising suffers from excessive transaction costs and imperfect information gathering. Local government occupies too small a footprint to gather the information for accurate long-term projections regarding demand for infrastructure and its durability vis-à-vis future technological developments. Aside from fostering experimentation with diverse regulatory arrangements, federalism in general and “home rule” in particular do little to advance regulatory reform. Devolution is particularly ineffective in markets “whose economies of scale, economies of scope, or dependence on technological innovation defies the regulatory reach of any geographically delimited jurisdiction.”⁴²⁸ Excessive decentralization may even be affirmatively debilitating in markets characterized by functional convergence, interoperability, and network efficiencies.⁴²⁹

An appeals court decision that otherwise “raises no central issues of telecommunications policy” illustrates this point.⁴³⁰ In 2004 the D.C. Circuit barred the FCC from delegating to the states the responsibility of determining whether an ILEC’s “failure to provide access to [certain] network elements would impair the ability” of a competitive carrier “to provide the services that it seeks to offer.”⁴³¹ The resulting bar to

⁴²⁵ *Permian Basin Area Rate Cases*, 390 U.S. 747, 790 (1968); *accord Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 501–02 (2002).

⁴²⁶ *FCC v. Pottsville Broad. Co.*, 309 U.S. 134, 138 (1940).

⁴²⁷ *FCC v. RCA Communications, Inc.*, 346 U.S. 86, 90 (1953).

⁴²⁸ Chen, *supra* note 343, at 310–11; cf. Daniel J. Gifford, *Federalism, Efficiency, the Commerce Clause, and the Sherman Act: Why We Should Follow a Consistent Free-Market Policy*, 44 EMORY L.J. 1227, 1248 (1995) (arguing that the “stringent clear-articulation policy” of *City of Lafayette v. Louisiana Power & Light Co.*, 435 U.S. 389 (1978), effectively federalizes Dillon’s rule of local government law, much to the chagrin of the “‘home rule’ movement”).

⁴²⁹ See Chen, *supra* note 343, at 311.

⁴³⁰ Epstein, *supra* note 302, at 343.

⁴³¹ 47 U.S.C. § 251(d)(2)(B) (2000); see *U.S. Telecomms. Ass’n v. FCC*, 359 F.3d

downstream delegation effectively curbs state regulators, the probable "source of most of the anticompetitive restraints remaining in the American economy."⁴³²

Long-term contracting for infrastructure cannot address the most important needs of sophisticated electricity and telecommunications networks. Greater static complexity and greater dynamic variation in the already uncertain path of technological evolution demand greater flexibility. Complex subject matter, asymmetrical information, high monitoring costs, and political uncertainty exacerbate the cost and complexity of ordinary contracting.⁴³³ These conditions drive the project of financing infrastructure away from direct contracting and toward a supple regulatory framework within which government may more freely renegotiate the terms by which private providers supply durable infrastructure.

B. The Persistence of the Public Utility Model

For the time being, American law is unlikely to supplant its existing complex of regulatory arrangements with a pervasive system of contracts connecting governments with private providers of infrastructure. Instead, the American understanding of infrastructure policy can be traced to either of the two great statutory charters of federal economic regulation, the Interstate Commerce Act of 1887⁴³⁴ or the Sherman Act of 1890.⁴³⁵ These statutes outlined "two related but distinct legal strategies for correcting the perceived defects of capitalistic competition."⁴³⁶ Absent a congressional determination to the contrary, the presence of "a detailed regulatory scheme such as that created by the [Telecommunications] Act ordinarily raises the question whether the regulated entities are not shielded from antitrust scrutiny altogether."⁴³⁷

Federal regulation of surface transportation, at least in its original

554, 565 (D.C. Cir. 2004).

⁴³² Gifford, *supra* note 428, at 1254.

⁴³³ See Karen Eggleston, Eric A. Posner & Richard Zeckhauser, *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 NW. U. L. REV. 91, 104-06 (2000).

⁴³⁴ Interstate Commerce Act, ch. 104, 24 Stat. 379 (1887).

⁴³⁵ Sherman Act, ch. 647, 26 Stat. 209 (1890).

⁴³⁶ Jim Chen, *Regulatory Education and Its Reform*, 16 YALE J. ON REG. 145, 149 (1999).

⁴³⁷ Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 406 (2004); see, e.g., United States v. Nat'l Ass'n of Sec. Dealers, Inc., 422 U.S. 694 (1975); Gordon v. New York Stock Exch., Inc., 422 U.S. 659 (1975).

incarnation, provided the model for command-and-control regulation of specific industries.⁴³⁸ Remarkable as it seems today, the Interstate Commerce Commission (ICC) supervised telephone rates for nearly a quarter century.⁴³⁹ The law that displaced the ICC from telecommunications, the epochal Communications Law of 1934,⁴⁴⁰ still provides the basic statutory framework for all wired and wireless carriers and broadcasters. The regulatory provisions of the Federal Power Act date from 1935⁴⁴¹ and remain largely intact despite the obsolescence of the constitutional distinction that inspired the original legislation⁴⁴² and despite two comprehensive overhauls in 1978⁴⁴³ and 1992.⁴⁴⁴ By contrast, federal antitrust law exhibits a far stronger faith in robust competition and its virtues. Private enforcement⁴⁴⁵ and an evolutive, “common law” approach to statutory interpretation⁴⁴⁶ are hallmarks of contract-based competition under

⁴³⁸ See Kearney & Merrill, *supra* note 44, at 1325 (“The original [regulatory] paradigm was established over 100 years ago with the enactment in 1887 of the Interstate Commerce Act.”).

⁴³⁹ See Mann-Elkins Act, ch. 309, 36 Stat. 539 (1910); *W. Union Tel. Co. v. Esteve Bros.*, 256 U.S. 566, 573 (1921); *Essential Communications Sys., Inc. v. Am. Tel. & Tel. Co.*, 610 F.2d 1114, 1118 (3d Cir. 1979). See generally Dean Burch, *Common Carrier Communications by Wire and Radio: A Retrospective*, 37 FED. COMM. L.J. 85, 87 (1985); Jim Chen, *The Legal Process and Political Economy of Telecommunications Reform*, 97 COLUM. L. REV. 835, 838–39 (1997); Glen O. Robinson, *The Federal Communications Act: An Essay on Origins and Regulatory Purpose*, in A LEGISLATIVE HISTORY OF THE COMMUNICATIONS ACT OF 1934, at 3, 8 (Max D. Paglin ed., 1989).

⁴⁴⁰ Ch. 652, 48 Stat. 1064.

⁴⁴¹ See Federal Power Act, ch. 687, 49 Stat. 838 (1935). The original Federal Power Act of 1920, 41 Stat. 1063 (1920), authorized the licensing of hydropower plants. See generally *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377, 423–24 (1940).

⁴⁴² See *Pub. Utils. Comm’n v. Attleboro Steam & Elec. Co.*, 273 U.S. 83, 89–90 (1927) (holding that wholesale transactions in electricity could not be regulated by either the originating or the terminating state); cf. *New York v. FERC*, 535 U.S. 1, 16–17, 23–24 (2002) (recognizing *Attleboro*’s inapplicability to an electricity market lacking crisp boundaries between intrastate and interstate transactions).

⁴⁴³ See Public Utility Regulatory Policies Act, Pub. L. No. 95-617, 92 Stat. 3117 (1978).

⁴⁴⁴ See Energy Policy Act, Pub. L. No. 102-486, 106 Stat. 2776 (1992).

⁴⁴⁵ See 15 U.S.C. § 15 (2000) (providing treble damage suits for “any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws . . .”); *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 489 (1977) (requiring that a Clayton Act plaintiff suffer “antitrust injury”); *Ill. Brick Co. v. Illinois*, 431 U.S. 720, 745–46 (1977) (barring an indirect purchaser from recovering antitrust damages).

⁴⁴⁶ See, e.g., *State Oil Co. v. Khan*, 522 U.S. 3, 20–21 (1997); *Spectrum Sports, Inc.*

America's "Magna Carta of free enterprise."⁴⁴⁷ The differences between public utility and antitrust law should not be overstated. Great regulatory charters, such as the Communications Act, the Natural Gas Act, and the Federal Power Act, also authorize regulatory agencies and "the federal courts to develop . . . basic principles" from these statutes' "common law-like" provisions.⁴⁴⁸ Both antitrust and its public utility counterpart empower enforcement agents to give contextual meaning to these statutes' "majestic generalities."⁴⁴⁹

This is the sense in which conventional public utility law may be understood as establishing some kind of "regulatory compact." Regulation establishes an incomplete, long-term contractual relationship that offers utilities a fair rate of return under terms that enable utilities and the government alike to renegotiate the terms and conditions of service at relatively low cost.⁴⁵⁰ Public utility regulation represents "a compact of sorts"—an implicit albeit legally unenforceable promise by government to ensure utility shareholders "a level of stability in earnings and value" in exchange for "universal, non-discriminatory service and protection from monopolistic profits."⁴⁵¹ The Wyoming Supreme Court has succinctly described the terms of this symbolic arrangement:

v. McQuillan, 506 U.S. 447, 454 (1993); Daniel A. Farber & Brett H. McDonnell, "Is There a Text in this Class?" *The Conflict Between Textualism and Antitrust*, 14 J. CONTEMP. LEGAL ISSUES 619, 624 (2005).

⁴⁴⁷ See, e.g., *Atl. Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 360 n.19 (1990) (Stevens, J., dissenting); *Community Communications Co. v. City of Boulder*, 455 U.S. 40, 56 n.19 (1982); *Ca. Retail Liquor Dealers Ass'n v. Midcal Aluminum, Inc.*, 445 U.S. 97, 110 (1980); *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 610 (1972).

⁴⁴⁸ Philip J. Weiser, *Toward a Next Generation Regulatory Strategy*, 35 LOY. U. CHI. L.J. 41, 51 (2003).

⁴⁴⁹ *Fay v. New York*, 332 U.S. 261, 282 (1947); accord *Katzenbach v. Morgan*, 384 U.S. 641, 648-49 (1966).

⁴⁵⁰ See WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM, *supra* note 408, at 347.

⁴⁵¹ *Jersey Cent. Power & Light Co. v. FERC*, 810 F.2d 1168, 1189 (D.C. Cir. 1987) (Starr, J., concurring) (emphasis added); accord *Transmission Access Policy Study Group v. FERC*, 225 F.3d 667, 700 (D.C. Cir. 2000), *affirmed in part sub nom. New York v. FERC*, 535 U.S. 1 (2002); see also WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM, *supra* note 408, at 347; cf. Jim Rossi, *The Common Law "Duty to Serve" and Protection of Consumers in an Age of Competitive Retail Public Utility Restructuring*, 51 VAND. L. REV. 1233, 1242-43 (1998) (describing the putative regulatory contract as the transformation of "an ancient common law duty" into a statutory "duty to serve" under contemporary public utility law).

The “regulatory compact” provides the fundamental basis for utility regulation. In general, the compact is a *theoretical agreement* between the utilities and the state in which, as a quid pro quo for being granted a monopoly in a geographical area for the provision of a particular good or service, the utility is subject to regulation by the state to ensure that it is prudently investing its revenues in order to provide the best and most efficient service possible to the consumer. In exchange, the utility is allowed to earn a fair rate of return on its rate base.⁴⁵²

Although the regulatory compact is not directly enforceable, it does have some impact on the interpretation and implementation of specific doctrines within the discretionary framework of public utility law. Of all the implicit promises made to the regulated firm under the metaphorical “regulatory compact,” none is so strong as the tacit pledge to shelter incumbent utilities from financially corrosive entry. When contemplating competitive petitions to serve a market already occupied by an incumbent, regulators pledge not to act solely on the basis of some pro-competitive economic theory, but rather to engage in a thorough examination of the factual context before granting a competitive petition. “Merely to assume that competition is bound to be of advantage, in an industry so regulated and so largely closed as is this one, is not enough.”⁴⁵³ Or as a federal court has said more recently, “mere invocation of theory is an insufficient substitute for substantial evidence and reasoned explanations.”⁴⁵⁴

The so-called regulatory compact is the product of a repeated dynamic game in which the principal objective of a private provider of infrastructure

⁴⁵² *PacifiCorp v. Pub. Serv. Comm’n*, 103 P.3d 862, 871 (Wyo. 2004) (emphasis added). Similar formulations are found throughout other federal and state cases. *See, e.g., Transmission Access Policy Study Group*, 225 F.3d at 700; *Allegheny Energy v. DQE, Inc.*, 74 F. Supp. 2d 482, 486 (W.D. Pa. 1999); *Hartwell Corp. v. Super. Ct.*, 27 Cal. 4th 256, 282 (2002); *U.S. Gypsum, Inc. v. Ind. Gas Co.*, 735 N.E.2d 790, 797 (Ind. 2000); *Ind. Gas Co., v. Office of Util. Consumer Counselor*, 575 N.E.2d 1044, 1046 (Ind. Ct. App. 1991); *City of Toledo v. Toledo Edison Co.*, 770 N.E.2d 132, 137 (Ohio Ct. Com. Pl. 2000). Though Wyoming’s *PacifiCorp* formulation of the regulatory compact emphasizes rate regulation, other descriptions of the compact stress the utility’s universal service obligations. *See, e.g., Office of Pub. Util. Counsel v. Pub. Util. Comm’n*, 104 S.W.3d 225, 227–28 (Tex. Ct. App. 2003) (“Under a fully regulated system, an electricity utility enters into a ‘regulatory compact’ with the public: in return for a monopoly over electricity service in a given area; the utility agrees to provide service to all requesting customers and to charge only the retail rates set by the Commission.”).

⁴⁵³ *FCC v. RCA Communications, Inc.*, 346 U.S. 86, 97 (1953); *accord, e.g., Hawaiian Tel. Co. v. FCC*, 498 F.2d 771, 776 (D.C. Cir. 1974).

⁴⁵⁴ *Elec. Consumers Res. Council v. FERC*, 747 F.2d 1511, 1517 (D.C. Cir. 1984).

is to curb regulators' temptation to renege on their original understanding.⁴⁵⁵ Firms seek ways to restrict regulators' legal discretion, especially in the face of changing economic conditions that may tempt regulators to subvert the regulatory compact. Large swings in a utility company's profits are especially likely to invite opportunistic behavior by regulators. Of course, opportunism infects all parties to any contract. The state may have a monopoly on violence, but no contractual party, public or private, is immune from the temptation to cheat. As Richard Epstein has said of "bargaining with the state" in the most general sense, "[b]argaining does not take place in a vacuum."⁴⁵⁶ To understand bargaining in the regulatory context, where one of the parties may be the government, we must first determine the legal frame of reference by "which government . . . contracts are to be assessed."⁴⁵⁷

What the regulatory compact does not represent, however, is the creation of specific, contractually enforceable rights running in favor of regulated utilities and against the government. Under no circumstances can the government, having chosen to engage a private partner to provide public infrastructure, be held to have waived its right to modify its legislation. The very existence of a body of public utility law and an expert regulatory agency implies that the government has already forsworn the alternatives of direct public enterprise and a concession contract with a private firm. "[A]bsent some clear indication that the legislature intends to bind itself contractually," courts must presume "that 'a law is not intended to create private contractual or vested rights but merely declares a policy to be pursued until the legislature shall ordain otherwise.'"⁴⁵⁸ To presume otherwise would subjugate the regulatory function of government, which is after all its primary calling, to the making of contracts.⁴⁵⁹ "The continued existence of a government would be of no great value, if by implications and presumptions, it was disarmed of the powers necessary to accomplish the ends of its creation"⁴⁶⁰ Unlike contracts, regulatory laws and policies

⁴⁵⁵ See Richard J. Gilbert & David M. Newbery, *The Dynamic Efficiency of Regulatory Constitutions*, 25 RAND J. ECON. 538 (1994).

⁴⁵⁶ RICHARD A. EPSTEIN, *BARGAINING WITH THE STATE* 18 (1993).

⁴⁵⁷ *Id.*

⁴⁵⁸ Nat'l R.R. Passenger Corp. v. Atchison, Topeka & Santa Fe Ry. Co., 470 U.S. 451, 465-66 (1985) (quoting Dodge v. Bd. of Educ., 302 U.S. 74, 79 (1937)); *accord*, e.g., Phelps Dodge Corp. v. Ariz. Elec. Power Coop., 83 P.3d 573, 598 (Ariz. Ct. App. 2004); *see also* Rector of Christ Church v. County of Philadelphia, 65 U.S. (24 How.) 300, 302 (1861) ("Such an interpretation is not to be favored").

⁴⁵⁹ See *Indiana ex rel. Anderson v. Brand*, 303 U.S. 95, 100 (1938).

⁴⁶⁰ *Charles River Bridge v. Warren Bridge*, 36 U.S. (11 Pet.) 420, 548 (1837));

“are inherently subject to revision and repeal, and to construe laws as contracts when the obligation is not clearly and unequivocally expressed would be to limit drastically the essential powers of a legislative body.”⁴⁶¹

Even the most generous Supreme Court decision on public contracting would not cripple the government in such a debilitating fashion. The 1996 case of *United States v. Winstar Corp.*⁴⁶² held the federal government responsible for violating an express agreement “to indemnify its contracting partners against financial losses arising from regulatory change.”⁴⁶³ Without reaching a precise legal rationale, a majority of Justices concluded that Congress had breached the Federal Home Loan Bank Board’s promise of favorable accounting treatment for certain savings and loan institutions.⁴⁶⁴ By contrast, neither telecommunications nor any other industry regulated as a public utility has proceeded under such a contract.⁴⁶⁵ The Telecommunications Act represents general legislation “designed to spread the costs of a societal problem”—namely, reconciling the discipline of monopoly in infrastructure markets with the preservation of universal access to infrastructure services—rather than a contractual arrangement between private firms and the government.⁴⁶⁶ In any event, every opinion in *Winstar* reaffirmed the longstanding rule against the freewheeling interpretation of contracts purporting to effect “a conveyance or surrender of sovereign power.”⁴⁶⁷

accord *Keefe v. Clark*, 322 U.S. 393, 397 (1944).

⁴⁶¹ *Atchison*, 470 U.S. at 466.

⁴⁶² 518 U.S. 839 (1996).

⁴⁶³ *Id.* at 887 (plurality opinion).

⁴⁶⁴ See generally ROSSI, *supra* note 68, at 119–20; Michael Malloy, *When You Wish upon Winstar: Contract Analysis and the Future of Regulatory Action*, 42 ST. LOUIS U. L.J. 409, 435–36 (1998).

⁴⁶⁵ Compare Hovenkamp, *supra* note 233, at 821 (arguing that the law of economic regulation has generally abandoned company-by-company charters in favor of broad statutes authorizing an expert agency to regulate entire industries in the public interest), with *Winstar*, 518 U.S. at 860–61 (plurality opinion) (acknowledging the need to identify the existence of an agreement between private parties and the government).

⁴⁶⁶ *Yankee Atomic Elec. Co. v. United States*, 112 F.3d 1569, 1576 n.6 (Fed. Cir. 1997), cert. denied, 524 U.S. 951 (1998).

⁴⁶⁷ *Winstar*, 518 U.S. at 878 (plurality opinion); see also *id.* at 918 (Breyer, J., concurring) (noting the need to “underscore[] the special circumstances that [are] required to convince [a] [c]ourt of the existence of [a] claimed promise.”); *id.* at 921 (Scalia, J., concurring in the judgment) (“Governments do not ordinarily agree to curtail their sovereign or legislative powers, and contracts must be interpreted in a commonsense way against that background understanding.”); *id.* at 926 (Rehnquist, C.J., dissenting) (“[A] waiver of sovereign authority will not be implied, but instead must be

Although the law of regulated industries has undergone rapid and extensive change, the putative "regulatory compact" should not be construed so as to cripple the government's ability to revisit the legislative framework by which it regulates privately supplied infrastructure. The United States' most important regulatory charters have survived several spectacular deregulatory episodes. The Natural Gas Policy Act of 1978,⁴⁶⁸ the Public Utility Regulatory Policies Act of 1978,⁴⁶⁹ the Energy Policy Act of 1992,⁴⁷⁰ and the Telecommunications Act of 1996⁴⁷¹ have all retained the basic formulas—certification of entry and exit in the public interest, convenience, and necessity, plus the regulation of just, reasonable, and nondiscriminatory rates—established by the Natural Gas Act,⁴⁷² the Federal Power Act,⁴⁷³ and the Communications Act of 1934.⁴⁷⁴ The Natural Gas Wellhead Decontrol Act of 1989⁴⁷⁵ ended federal regulation of wellhead gas prices, but that statute is more accurately regarded as an overdue restoration of the Natural Gas Act's original exemption of the "production and gathering" of gas.⁴⁷⁶

Not even the transfer of power from the ICC to the Surface Transportation Board had significant impact. The ICC Termination Act of 1995⁴⁷⁷ performed the mostly "symbolic gesture"⁴⁷⁸ of abolishing the first federal regulatory agency.⁴⁷⁹ Statutes passed in 1976 and 1980 had already eliminated most regulatory oversight from railroads.⁴⁸⁰ Statutes passed in 1993 and 1994⁴⁸¹ completed the gradual elimination of antidiscrimination

"surrendered in unmistakable terms."") (citing *United States v. Cherokee Nation*, 480 U.S. 700, 707 (1987)); cf. *Franklin Sav. Corp. v. United States*, 180 F.3d 1124, 1142 (10th Cir. 1999) (observing that *Winstar* does not affect the United States' tort liability).

⁴⁶⁸ Pub. L. No. 95-621, 92 Stat. 3350.

⁴⁶⁹ Pub. L. No. 95-617, 92 Stat. 3117.

⁴⁷⁰ Pub. L. No. 102-486, 106 Stat. 2776.

⁴⁷¹ Pub. L. No. 104-104, 110 Stat. 56.

⁴⁷² Ch. 556, 52 Stat. 821 (1938).

⁴⁷³ Ch. 687, 49 Stat. 838 (1935).

⁴⁷⁴ Ch. 652, 48 Stat. 1064.

⁴⁷⁵ Pub. L. No. 101-60, 103 Stat. 157.

⁴⁷⁶ See *Phillips Petroleum Co. v. Wisconsin*, 347 U.S. 672, 677 (1954).

⁴⁷⁷ Pub. L. No. 104-88, 109 Stat. 803.

⁴⁷⁸ GÓMEZ-IBÁÑEZ, *supra* note 2, at 194.

⁴⁷⁹ See Act of Feb. 4, 1887, ch. 104, 24 Stat. 379. See generally Clyde B. Aitchison, *The Evolution of the Interstate Commerce Act: 1887-1937*, 5 GEO. WASH. L. REV. 289, 289-90 (1937).

⁴⁸⁰ See Railroad Revitalization and Regulatory Reform Act of 1976, Pub. L. No. 94-210, 90 Stat. 31; Staggers Rail Act of 1980, Pub. L. No. 96-448, 94 Stat. 1895.

⁴⁸¹ See Negotiated Rates Act of 1993, Pub. L. No. 103-180, 107 Stat. 2044;

and tariffing requirements in trucking, a deregulatory process traceable to the Motor Carrier Act of 1980.⁴⁸² On the eve of the ICC's abolition and the transfer of its shriveled mandate to the "Surf Board," politicians and commentators alike had already been thinking of carriage by rail and by truck as deregulated enterprises for more than a decade.⁴⁸³

Paradoxically, deregulation may be more legally complex than command-and-control regulation. Simply put, freer markets demand more rules.⁴⁸⁴ Deregulation's first stage gathers low-hanging fruit: legislators can subject "industries and industry segments with few natural monopoly features" to "complete detariffing, elimination of all entry restrictions, and outright abolition of the control of an administrative agency."⁴⁸⁵ As deregulation progresses, however, "the effort to substitute competition for regulation may actually increase the complexity and importance of the regulator's task."⁴⁸⁶ Once the comprehensive reform of laws such as the Federal Power Act and the Communications Act redirects the government's "attention [toward] the fraction of [each] industry's activities that are monopolistic," the regulatory focus shifts toward supervision of the "complex relationships between the monopolistic and the competitive segments of the industry."⁴⁸⁷ This transition presents "a trade-off between the benefits from more competition and the costs from reduced coordination."⁴⁸⁸

This difficulty explains the basic paradox of deregulation as an engine of legal complexity. The Telecommunications Act in particular has drawn sharp criticism for failing to be "a model of clarity."⁴⁸⁹ "[M]ost

Trucking Industry Regulatory Reform Act of 1994, Pub. L. No. 103-311, 108 Stat. 1683.

⁴⁸² Pub. L. No. 96-296, 94 Stat. 793.

⁴⁸³ Compare H.R. REP. NO. 104-311, at 90 (1995) (noting that "the railroad industry ha[d] operated in an essentially deregulated environment" since the passage of the Staggers Act) with FRANK J. DOOLEY & WILLIAM E. THOMS, RAILROAD LAW A DECADE AFTER DEREGULATION (1994) (*res ipsa loquitur*).

⁴⁸⁴ See generally STEVEN K. VOGEL, FREER MARKETS, MORE RULES: REGULATORY REFORM IN ADVANCED INDUSTRIALIZED COUNTRIES 2-5 (1996).

⁴⁸⁵ Kearney & Merrill, *supra* note 44, at 1363.

⁴⁸⁶ GÓMEZ-IBÁÑEZ, *supra* note 2, at 249.

⁴⁸⁷ *Id.*

⁴⁸⁸ *Id.*

⁴⁸⁹ AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 397 (1999) (describing the Act's lack of clarity as a "gross understatement"); accord, e.g., Mich. Bell Tel. Co. v. MCIMetro Access Transmission Servs., 323 F.3d 348, 352 (6th Cir. 2003); MCI Telecomms. Corp. v. U.S. W. Communications, 204 F.3d 1262, 1266 (9th Cir. 2000); Tex. Office of Pub. Util. Counsel v. FCC, 183 F.3d 393, 449 (5th Cir. 1999), *cert. denied*

unfortunate," the Supreme Court has lamented, this "piece of legislation," which "profoundly affects a crucial segment of the economy worth tens of billions of dollars" appears "in many important respects" to be "a model of ambiguity or indeed self-contradiction."⁴⁹⁰ The Telecommunications Act hardly even feels deregulatory: "How can an Act that says 'shall' 2,036 times be deregulatory?"⁴⁹¹ In other words, although public utility law has slouched toward "deregulation" for a generation, the sheer complexity of the task still renders it impossible to interpret the legal relationship between the government and the regulated firm in strictly contractual terms.

In other words, deregulation transforms rather than eliminates comprehensive governmental oversight. The old pitfalls remain. Alfred Kahn, a living "Prophet of Regulation,"⁴⁹² has documented the many ways in which deregulation can fail as spectacularly as conventional regulation.⁴⁹³ *Ceteris paribus*, regulation should minimize opportunities for mischief. This approach superficially resembles what Richard Epstein has prescribed in a different context: regulators should adopt simple rules for a complex economy.⁴⁹⁴

A general preference for simple rules over more complex alternatives reflects the one lesson that utility customers have unwittingly taught throughout deregulation: because choice can backfire, more sometimes is less. Complete freedom of choice has encouraged retail consumers to refuse the benefits of competition. For example, twenty years after the Bell breakup decree,⁴⁹⁵ AT&T retains a whopping sixty percent of the retail long-distance

sub nom. Celpage, Inc. v. FCC, 530 U.S. 1210 (2000) and *cert. dismissed sub nom.* GTE Serv. Corp. v. FCC, 531 U.S. 975 (2000); P.R. Tel. Co. v. Telecomms. Regulatory Bd., 189 F.3d 1, 19 (1st Cir. 1999); Sprint Spectrum, L.P. v. Willoth, 176 F.3d 630, 641 (2d Cir. 1999).

⁴⁹⁰ *Iowa Utils. Bd.*, 525 U.S. at 397; *cf.* Epstein, *supra* note 302, at 341 (asserting that "the language of" the Telecommunications Act "does not speak with magnificent clarity").

⁴⁹¹ Joseph Farrell, *Creating Local Competition*, 49 FED. COMM. L.J. 201, 211 (1996).

⁴⁹² See THOMAS K. MCCRAW, PROPHETS OF REGULATION: CHARLES FRANCIS ADAMS, LOUIS D. BRANDEIS, JAMES M. LANDIS, ALFRED E. KAHN 223 (1984).

⁴⁹³ See generally ALFRED E. KAHN, WHOM THE GODS WOULD DESTROY, OR HOW NOT TO DEREGULATE (2001).

⁴⁹⁴ See RICHARD A. EPSTEIN, SIMPLE RULES FOR A COMPLEX WORLD 21 (1995).

⁴⁹⁵ See *United States v. W. Elec. Co.*, 569 F. Supp. 1057, 1061 (D.D.C. 1983), *aff'd mem. sub nom.* California v. United States, 464 U.S. 1013 (1983); *United States v. Am. Tel. & Tel. Co.*, 552 F. Supp. 131, 226-32 (D.D.C. 1982), *aff'd mem. sub nom.* Maryland v. United States, 460 U.S. 1001 (1983), *terminated by* Telecommunications Act of 1996, Pub. L. No. 104-104, § 601(a)(1), 110 Stat. 56, 143-44 (codified as amended at 47

market.⁴⁹⁶ Only fifteen percent of retail consumers in Philadelphia⁴⁹⁷ and an astonishing three percent in California switched providers after the introduction of retail competition in electricity.⁴⁹⁸ Regulators may be more sophisticated than the consumers they protect, but as with consumers, psychological constraints limit the amount of choice that regulators can realistically handle. Too often, overloaded regulators reflexively protect the firms and legal structures they know best.

Simplicity alone is no guarantee of substantive correctness. The hoary debate between the “fair value” and “prudent investment” standards for the valuation of utility property illustrates how short-run administrability may obstruct superior regulation in the long run. Nevertheless, even if the simpler rule turns out to be imperfect or even wrong, the maintenance of a streamlined legal platform enables future regulators to embrace superior rules by minimizing the amount of legal “underbrush” that must eventually be cleared. As with automated tools whose users no longer understand the technological details once known to their developers,⁴⁹⁹ legal doctrines will eventually fall into the hands of decisionmakers who neither know nor appreciate those doctrines’ subtleties.

No system of regulation can consistently satisfy the fundamental criterion for governmental intervention: “mov[ing] society closer to the solution that the parties would have agreed to in a world free of transaction costs.”⁵⁰⁰ As a seemingly hopeless quest to set rates according to competitive conditions that do not exist and cannot emerge in the presence of a regulatory apparatus,⁵⁰¹ conventional rate-of-return regulation richly deserves its derogatory reputation as “the most speculative undertaking . . .

U.S.C. § 152 note (2000)).

⁴⁹⁶ See BARRY SCHWARTZ, *THE PARADOX OF CHOICE: WHY MORE IS LESS* 25 (2004).

⁴⁹⁷ See *id.*

⁴⁹⁸ See Richard D. Cudahy, *Whither Deregulation: A Look at the Portents*, 58 N.Y.U. ANN. SURV. AM. L. 155, 174, 185–86 (2001).

⁴⁹⁹ See generally MICHAEL L. DERTOUZOS, *THE UNFINISHED REVOLUTION: HUMAN-CENTERED COMPUTERS AND WHAT THEY CAN DO FOR US* (2001); JAKOB NIELSEN, *USABILITY ENGINEERING* (1994); DONALD A. NORMAN, *THINGS THAT MAKE US SMART: DEFENDING HUMAN ATTRIBUTES IN THE AGE OF THE MACHINE* (1993); DONALD A. NORMAN, *THE DESIGN OF EVERYDAY THINGS* (1990); COST-JUSTIFYING USABILITY (Randolph G. Bias & Deborah J. Mayhew eds., 1994); Leon E. Wein, *Maladjusted Contrivances and Clumsy Automation: A Jurisprudential Investigation*, 9 HARV. J.L. & TECH. 375, 380–81 (1996).

⁵⁰⁰ GÓMEZ-IBÁÑEZ, *supra* note 2, at 22.

⁵⁰¹ See generally Posner, *supra* note 395, at 611–16.

in the entire history of [Anglo-American] jurisprudence.”⁵⁰² The impossibility of attaining perfection makes ratemaking a perennial source of judicial and administrative frustration: “Allocation of costs is not a matter for the slide-rule. It involves judgment on a myriad of facts. It has no claim to an exact science.”⁵⁰³ Even at its best, utility regulation “will always [raise] . . . embarrassing question[s]” of indeterminacy and inefficacy.⁵⁰⁴

The law of regulated industries demands “highly complex judgments . . . if legislative desires, majoritarian needs, and the demands of continuity and change are to be met in a system that never stands still technologically or sociologically.”⁵⁰⁵ This body of law requires both an expectation of imperfection and an enduring commitment to reinvention. Those obligations vastly exceed the capacity of that woefully obsolete legal metaphor, the “regulatory compact.”

IV. THE DEATH OF COMPACT

“Like all other questions, the question of how to promote a flourishing society . . . [should] be answered as much by experience [as by] theory.”⁵⁰⁶ In a legal system as stable as the United States’, regulatory change, like its glacial equivalent, is slow in coming but epochal when it happens. The “great transformation” of the law of regulated industries has occurred in mostly piecemeal fashion.⁵⁰⁷ Without detailed legislative guidance, administrative agencies have used their discretion to effect incremental changes in the natural gas, electricity, and telecommunications industries.

These regulators have sharpened their wisdom through trial and error. Constant legal change is a hallmark of what an earlier generation called “muddling through.”⁵⁰⁸ As late as the 1980s, “[v]ertical integration between

⁵⁰² *West v. Chesapeake & Potomac Tel. Co.*, 295 U.S. 662, 689 (1935) (Stone, J., dissenting).

⁵⁰³ *Colo. Interstate Gas Co. v. Fed. Power Comm’n*, 324 U.S. 581, 589 (1945); *accord Nat’l Ass’n of Greeting Card Publishers v. U.S. Postal Serv.*, 462 U.S. 810, 825 (1983).

⁵⁰⁴ *Smyth v. Ames*, 169 U.S. 466, 546 (1898); *accord Duquesne Light Co. v. Barasch*, 488 U.S. 299, 308 (1989).

⁵⁰⁵ GUIDO CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* 68 (1982).

⁵⁰⁶ Daniel A. Farber, *Legal Pragmatism and the Constitution*, 72 MINN. L. REV. 1331, 1347 (1988).

⁵⁰⁷ See generally Kearney & Merrill, *supra* note 44.

⁵⁰⁸ See Charles E. Lindblom, *The Science of “Muddling Through,”* 19 PUB. ADMIN. REV. 79, 79 (1959); cf. Kenneth C. Davis, *A New Approach to Delegation*, 36 U. CHI. L. REV. 713, 733 (1969) (urging administrative agencies to accumulate information over

generation and transmission" in electricity was "virtually universal."⁵⁰⁹ "Fifty years from now," one scholar has speculated, "we may look back to view private provision of infrastructure as the norm, and public provision as a failed experiment of the mid-twentieth century."⁵¹⁰ Despite its shortcomings, though, conventional utility regulation and the vertically integrated industrial structure that it promoted may have reflected the most efficient arrangements available to the United States throughout much of the twentieth century.⁵¹¹ Who indeed "knows what unlikely resurrection the Easter-tide may bring?"⁵¹²

What has not survived these cycles of regulatory reform is the notion of a "regulatory compact." That conventional trope provides no useful guidance in the law of regulated industries. The very presence of public utility regulation represents not one but two decisions to forgo alternative policies more amenable to dispute resolution by contract. Having elected neither to build infrastructure on its own, nor to enter a bilateral contract with a private provider, the government must be left free to implement its regulatory statutes under the usual interpretive norms that govern all other legal undertakings.

"Some truths are so basic that, like the air around us, they are easily overlooked."⁵¹³ Simple in theory, the project of emulating the competitive marketplace defies easy administration. "[N]either law nor economics has yet devised generally accepted standards for the evaluation of [regulatory schemes]"⁵¹⁴ "Economic analysis and market predictions" simply do not constitute "an exact science."⁵¹⁵ Regulatory law is an experiment, "as all life is an experiment";⁵¹⁶

time about the industries they regulate and to follow a "common law" body of rules or precedents in formulating policy).

⁵⁰⁹ PAUL L. JOSKOW & RICHARD SCHMALENSSEE, *MARKETS FOR POWER: AN ANALYSIS OF ELECTRIC UTILITY DEREGULATION* 113 (1983).

⁵¹⁰ GÓMEZ-IBÁÑEZ, *supra* note 2, at 2.

⁵¹¹ See Peter Z. Grossman, *Is Anything Naturally a Monopoly?*, in *THE END OF A NATURAL MONOPOLY: DEREGULATION AND COMPETITION IN THE ELECTRIC POWER INDUSTRY* 11, 31–32 (Peter Z. Grossman & Daniel H. Cole eds., 2003); Paul L. Joskow, *Introducing Competition into Regulated Network Industries: From Hierarchies to Markets in Electricity*, in *FIRMS, MARKETS AND HIERARCHIES* 237, 243–54 (Glenn R. Carroll & David J. Teece eds., 1995).

⁵¹² GRANT GILMORE, *THE DEATH OF CONTRACT* 103 (1974).

⁵¹³ *New York v. United States*, 505 U.S. 144, 187 (1992).

⁵¹⁴ *Permian Basin Area Rate Cases*, 390 U.S. 747, 790 (1968).

⁵¹⁵ *United States v. W. Elec. Co.*, 900 F.2d 283, 297 (D.C. Cir. 1990).

⁵¹⁶ *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

The fixing of future rates always involves an element of prediction. Even monopolies must sell their services in a market where there is competition for the consumer's dollar and the price of a commodity affects its demand and use. This effect may be predicted or projected, but it can be known only from experience.⁵¹⁷

"The music in my heart I bore, / Long after it was heard no more."⁵¹⁸ The "regulatory compact" is dead. The law should find doctrinal replacements better suited to the exigencies of deregulation. In an age of volatile networks, the regulatory enterprise has become "so vast that fully to comprehend it would require an almost universal knowledge ranging from [the natural and social sciences] to the niceties of the legislative, judicial and administrative processes of government."⁵¹⁹ No simplistic "compact" could capture the complexity at stake or provide the flexibility that contemporary regulators need. Proper regulatory design "permits rates to be experimentally laid down and experimentally tried out" and "preserves that flexibility of adaptation" so essential "to the life and growth of our great and changing commerce."⁵²⁰

Only by stressing the future over the past can we "find in motion what was lost in space."⁵²¹ Let us bid farewell to the regulatory compact, faithful but fatally flawed servant of the law. A world dedicated to efficient markets, political freedom, and technological innovation has no place for retrospective regulation. "For nowadays the world is lit by lightning! Blow out your candles . . . and so goodbye. . . ."⁵²²

⁵¹⁷ *Mkt. St. R.R. v. R.R. Comm'n*, 324 U.S. 548, 569 (1945).

⁵¹⁸ WORDSWORTH, *supra* note 351, at 192.

⁵¹⁹ *Queensboro Farms Prods., Inc. v. Wickard*, 137 F.2d 969, 975 (2d Cir. 1943); *cf. Pennsylvania v. West Virginia*, 262 U.S. 553, 621 (1923) (Brandeis, J., dissenting) ("In no other field of public service regulation is the controlling body confronted with factors so baffling as in the natural gas industry . . .").

⁵²⁰ *Eagle Cotton Oil Co. v. S. Ry. Co.*, 51 F.2d 443, 447 (5th Cir. 1931); *accord Great N. Ry. Co. v. Sunburst Oil & Ref. Co.*, 287 U.S. 358, 363 (1932),

⁵²¹ TENNESSEE WILLIAMS, *THE GLASS MENAGERIE* 97 (Robert Bray intro., 1999) (1st ed. 1945).

⁵²² *Id.*